



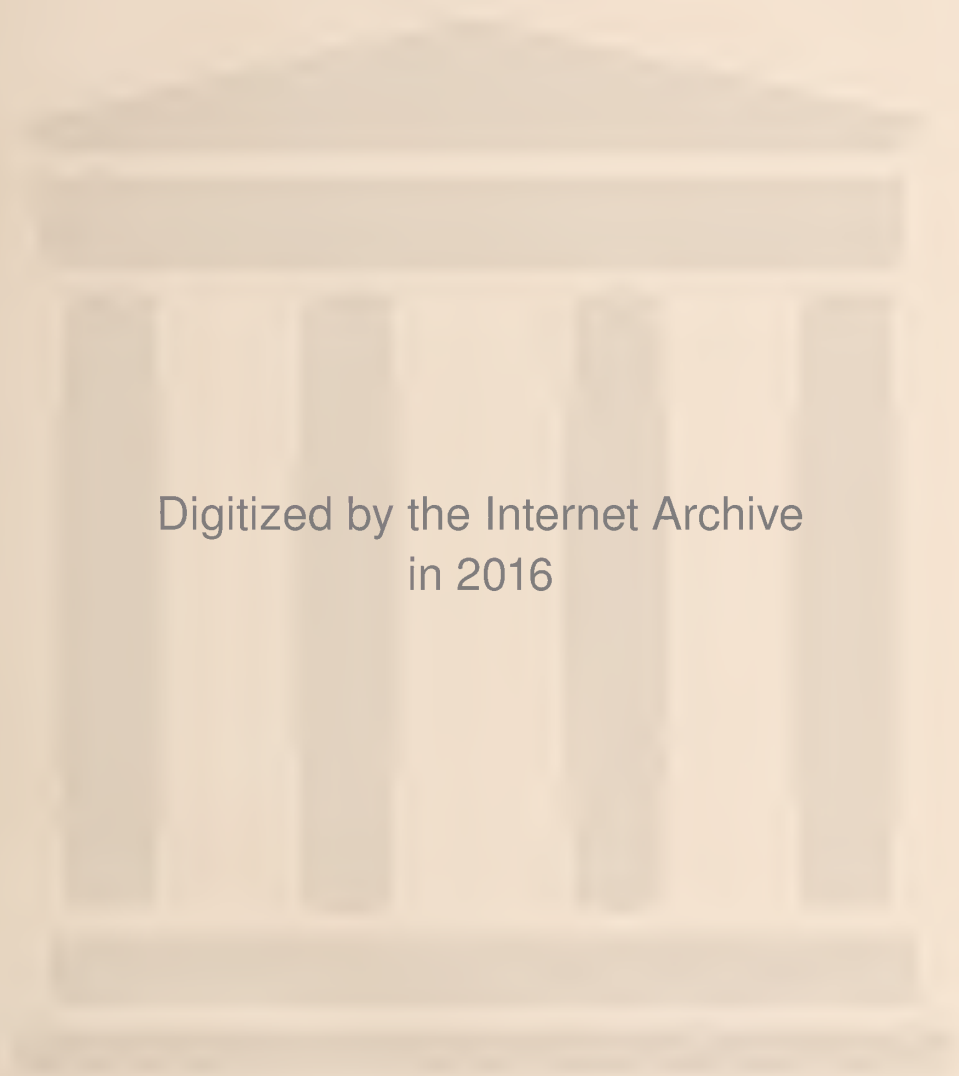
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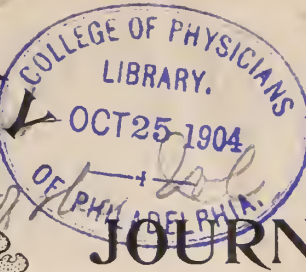
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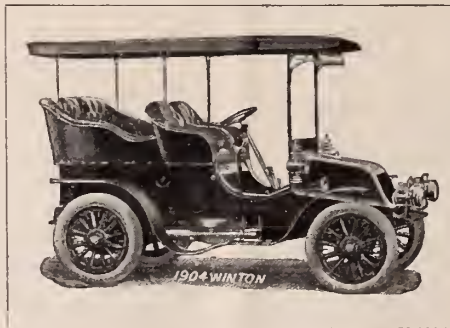
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ADDRESS OF WELCOME IN BEHALF OF THE MEDICAL PROFESSION OF LEXINGTON.

Delivered by the Hon. W. C. P. Breckenridge.

Mr. President, and may I call you gentlemen of the medical profession, brethren?

If I am not a brother, then I am your first cousin.

I am not only a lawyer, I feel that there is a very close tie between me and you who are devoting your lives to this high work; I feel a professional kinship to you.

I am somewhat of a doctor by inheritance.

Way back yonder, early in the history of the country, two of my ancestors had sense enough to leave Great Britain, and come to this country. They were doctors.

Ancestors of mine left two funds devoted to scientific and medical research, and for the founding of a hospital. I do not know that any great good was accomplished, but it shows how the love of research springs out of the love of humanity.

I know that the profession of medicine is a livelihood, as well as a profession, and you who have so unselfishly devoted your lives to the study of this great science, and to the work of relieving suffering, are certainly entitled to your compensation, and, I well know, too often, you do not receive financial reward commensurate with your labors.

I have another connection with the medical profession, which might be regarded as a mark of kinship. I am perhaps a walking monument to the ignorance of the early doctors.

In those days the doctors believed in cupping, and in leeching, and I well remember the innumerable applications of leeches to my body by the doctors.

As to calomel, I think I have taken enough to start a good sized wholesale house, not to mention the podophyllin, and other remedies of the day, of which I have recollections which can never pass away.

I want to say that among physicians I have found some of the most beloved men I have ever known.

My friend, Dr. Lewis, of Georgetown, is one of the best, and one of the noblest men I have ever known, also Dr. Griscom.

They were noble men who went where suffering humanity required, and where their profession called.

The history of the medical profession is a history of these noble lives of sacrifice; hundreds and thousands of them have passed over to their rest, and are now sitting beside the throne of the Great Physician.

Returning again to the subject of medicine, the first thing that the doctor did in those good old times, was to get a cup of hot water, put a tablespoonful or two tablespoonfuls of ipecac; then take another teacup, and put in a little molasses, then add a tablespoonful or two of castor oil. The castor oil and ipecac being exceedingly active, he left you for awhile to your own devices, while he took out his old knife, the same one he used to cut his tobacco with, and measured out some calomel, the dose being 20 grains if you were an adult, somewhat less if young. If you did not die, he said "Well, you see how the science and art of medicine is progressing." If we did die, it was accepted as a dispensation of providence.

Now, I have watched the progress of medicine for another reason than that I had been a patient when its practice was far from being up to present standards. I, myself, was a student of medicine, having studied chemistry under Dr. R. J. Burgess; Dr. Plummer was professor of surgery, a very eloquent man, a man who could take a hip bone and talk about it so interestingly that the students would applaud; then there was Dr. Yandell, who was professor of anatomy.

I took chemistry, and I took dissecting with my friends who were studying medicine.

There were five or six of us then; three of us are still alive.

I discovered that I did not know enough about medicine to attempt to use my knowledge upon human beings.

It seems to me that of all the systems of education of which I know anything, it was the poorest.

There were two medical students who roomed with me, and they attended lectures every morning before 8:00 o'clock; three days in the week they had four lectures in the morning, and three in the afternoon, and three days in the week they had clinics.

I have had a great deal to do with

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physicians all my life; I have owed much to the medical profession for the assistance given me in those cases where my own profession could not furnish the special information required. Oftentimes, my success in cases has been due to the knowledge of the physician who so kindly assisted me. The human mind is so complicated, the brain is so unknown. When it was necessary in presenting my case to the judge and jury that I have further knowledge of this wonderful body of ours, I have always known some physicians kind enough, and learned enough to furnish me the information which I needed. I have plagiarized from them for the past forty years.

I do not know how, in the practice of my profession, I could have gotten along, except for the aid of the doctors, and I have never in any case called upon the doctors but that I have received the readiest response.

I take occasion now, for it may never be my pleasure again to meet so many physicians, to express my great debt for the almost numberless cases when I have been debtor.

I have another connection with your profession; that of personal friendship.

I am a Kentuckian of Kentuckians; was educated in a Kentucky college, served with Kentucky troops, and I want to say that among the best friends I have made, were members of your profession.

In the hour of distress, when disease has invaded the home, it is the doctor who stands beside death, and wrestles with death, and I can find no words that will give full expression to the gratitude which I feel toward the medical profession because of their aid, and the comfort they brought in these times of sorrow.

This, my friends of the medical profession, is your duty and your inspiration, and what an inspiration it must be!

As we see you going about your duties, we can feel that you are working under an inspiration, you hold human life in the hollow of your hands; you make death flee before you, and I think of all the inspirations, that of the physician is highest, excepting, perhaps, the preacher and the teacher. I am inclined to hold the teacher highest, because the teacher is the creator; he takes the unformed character and ignorant mind and pours into it the spirit and the power to know and to do.

This is the first thing; then comes the preacher, who holds up before them the ambitions, the hopes, the aspirations, the possibilities of time and eternity.

I welcome you members of this great and noble profession to the hospitalities of our city; I welcome you in the name of our city; I welcome you in the name of our citizens; I welcome you to our hopes and to our aspirations: when you go away from here, take with you our best wishes.

RESPONSE BY DR. J. B. MARVIN, LOUISVILLE.

Mr. President, and gentlemen of the Kentucky State Medical Association:

After an address of such silvery eloquence, silence might well be golden.

But your chairman has laid upon me the injunction to act as the mouthpiece of this Society.

I feel too well that the doctor who gleans where the lawyer has reaped, gathers only chaff.

The fact occurred to my mind, that the doctor is the product of evolution; the lawyer, of precedent. He does not change; we do.

I am reminded of an incident which I read some time ago, which occurred in Texas. A Mexican was found dead; they sent for a doctor, who pronounced him dead from gunshot wound; the Justice of the Peace held a court of inquiry, and decided that the man was dead; the people were about to disperse, when the Justice said, "Wait a minute; there was found on this man \$50.00 and a pistol; it is against the law, an offense against the peace and dignity of Texas to carry concealed weapons, and I therefore confiscate the pistol, and fine him \$1.00 and costs (the costs being sufficient to absorb the balance of the money.)"

Will you pardon me; since I came upon the platform, it has crept into my memory that there is absent one who has been with us in all our meetings for the last forty years: he is the foremost citizen of his community, not only as physician, but in every other way. I speak of Dr. John A. Lewis. It seems that there is something lacking in this place; it does not seem quite right.

I do not wish to harrow your feelings; these thoughts came over me, and must have come over the most of the members of the Society.

PRESIDENT'S ANNUAL ADDRESS.

Steele Bailey, Stanford.

A REVIEW OF THE PRESENT AFFAIRS OF THE ASSOCIATION.

Honored by my election to the presidency, permit me to express to you my sincere thanks for the distinction conferred, and my high appreciation of the honor of presiding over your deliberations, at this the 49th annual meeting of the Kentucky State Medical Association.

It is fashionable, from the highest to the lowest organizations, medical and otherwise, for the president to make an address at each annual re-union, to give an account of his stewardship, furnishing as he should a reliable and practical statement of the scientific, ethical and fellowship affairs of the body over which he presides. I shall not undertake a sympathetic study of the history of our society, nor shall I occupy your attention in telling you of the renowned skill and wisdom of the many men whose honor and pleasure it has been to be members of our time-honored society.

A chapter of exceeding interest might be written upon the lives, attainments and associations of the forty-eight famous ex-presidents of the Association: it would necessarily comprehend the history of the marvellous progress of the medical profession of the State. Like Cornelia of old, that paragon of mothers, whose noble example illumines one of history's darkest pages, we proudly exclaim—as did she of the Gracchi—"These are our jewels."

I shall not endeavor to speak words of wisdom or instruction in the presence of the Kentucky State Medical Association, exemplifying as it does the essence of the intelligence and progression of the medical profession of the Commonwealth; nor shall I speak of an individual except for some practical purpose or to illustrate some general principle.

My talk will be of generalities.

I shall not attempt to generalize as did a late lamented philosopher, everything he said was a generalization. If you remarked it was a fine day, Spencer would answer, "Yes, anti-cyclonic conditions like those of yesterday seldom break up without a warning of the advent of a depression from westward!"

If you observed that either Miss Mary Johnson or Mrs. Smith was a pretty wo-

man, Spencer would reply: "Her father was a West Highlander and her mother an Irish-woman; and intermarriage between Highlanders and Irish always produce physically handsome but intellectually inferior children."

I must here take you into my confidence and tell you that a tabulation of my pedigree would read like that of Miss Mary Johnson's or Mrs. Smith's. According to that I cannot help but be handsome, and if I shall fall beneath your expectations this evening throw the soft mantle of charity over the mesalliance between the Highlander and the Irish.

My text shall be a review of the present affairs of your association, and as it comes not in my books, it will be free from ornament.

To the society organizations of the medical profession of this country, as a body, must we give credit for the vitality, power and influence which we now possess.

The English of an old Greek proverb that "one man is no man" concisely expresses the great truth that man is never independent of his fellow-man. The development of his physical, mental and moral capabilities cannot be effected alone, nor can the great purposes of life for which he is intended be accomplished and the comforts and happiness which he is constituted to enjoy be realized, without the co-operation and companionship of others.

This reflection may be humiliating to a thin-skinned individual's feelings, or to a self-complacent bachelor's, possibly, but on sober, second thought he is forced to acknowledge the fact when he observes the progress of individuals and the advancement of civilization.

We, as a society, have heard much of "organization" within the past two years; it has been the shibboleth in every state and in every county of every state and territory, from Maine to California, from Alaska to the Philippines. Organization has accomplished wonders and more marvelous things are yet to follow. It is not yet complete in the State of Kentucky. As there are a few things left undone in our household which should be done, I must give it a passing notice. To give it much space, however it having been vamped and re-vamped so often, would require more temerity than I possess; besides I have in mind the predicament, according to the narration, of the awkwardest man in the world who accidentally shot his neighbor's dog and in explaining to his neighbor how he did it, accidentally shot his neighbor, whereupon he was haled before the Coroner and jury and

in explaining to the coroner how he did it he accidentally shot the Coroner, whereupon he was forthwith discharged for fear he would undertake to explain it to some one else.

To focus the whole of one's being upon any act is to make that act a success, and to continue to focus upon each successive act is to round out one's days in one supreme achievement.

We have organized, have focused, in other words, and rejoice at it. We see that unity in medicine is absolutely essential to efficiency and progress. The present perfect organization of the medical profession has not been made by legislation, scarcely a bit of it. It has been accomplished by hard work, mixed with brains, by accomplished men, artists in the business, one of whom is our judicial J. N. McCormack; men who knew what they wanted to do, who went ahead and did it, and as a reward their most optimistic wishes have been more than realized. They have given to us a platform—the Constitution and by-laws—a real democratic one, that deserves to live because it will not do for one man, what it refuses to do for all men. It required expert talent of a high order to construct the fabric, obviously it will take a Sampson to successfully assault it. It's true character is national; it has the affection of the entire profession of these broad United States. In the State of Kentucky, our Councillors, to whom all praise and benedictions are due for their heroic efforts in bringing about the perfection of organization to which we have attained, are men, not engaged in the work for profit or vain-glory, but who were urged on by a conviction, their convictions were strengthened by energies and these, when united with their many and varied talents, without which latter, the matter in hand would have been as sounding brass and tinkling cymbal, have been enabled to reach the coveted goal. Let the Association give them the glad hand: efficient and faithful servants. "All their better deeds shall be in water writ, but these in marble."

The progress of the organization of the profession in our state, as shown by the list of unorganized counties, is remarkable.

Today, so few counties are not organized or have not had the subject mentioned, that a short list includes them all. With ninety-five counties now in the roster, all working harmoniously, or as much so as doctors abiding on the "pacific slope" can, which, be it said, is sometimes like that of the Grimalkin's, whose domestic fighting history is familiar, we should

plume ourselves and make supreme efforts for the conversion of the twenty or more counties yet without the pale. It has been told us that most of these counties are in the mountains—God's Country,—that the population is small, with few physicians, and that it would be wise to have them attend meetings in neighboring counties. This advice reads very well on paper. Will they agree to it? Whether or no, it is fitting that this Association, having a community of sentiment relating to the honor, the interests, and the usefulness of the whole medical profession, in the Blue Grass as in the Highlands, should strenuously exert itself during the succeeding summer for the unorganized counties. They must be organized. From Colorado Medicine we quote: The size of a medical society may indicate somewhat its strength and importance. From the standpoint of the society, growth is a good sign. The more members brought to join it, the wider its influence, the larger the number benefited by it. But from the standpoint of the individual member who goes into a medical society to learn something or for the opportunity of seeing things from other men's point of view, the benefit is not at all proportioned to the size of the society. What any of us can hear, does not depend upon how many others are listening to the same speaker. What one can understand, or what new ideas will be awakened in him, depends but little on how many others are present. For the purpose of the member who is learning anything, one speaker and one hearer constitute the active participants, even in the largest gatherings. In many respects the ideal conditions for learning exist only when there are but two present. (In courting three make a crowd). So that there can be question and answer, and the speaker's words may be addressed exactly to the thought of that particular hearer. Of course, if one goes to a medical meeting solely for the benevolent purpose of instructing his fellow members, or for the less benevolent purpose of advertising his skill in some specialty, or to hear himself talk, or to get his name in the papers, the larger the gathering he can get to listen to him, the better. But the mass of those who go to medical meetings are the boys in the trenches, the bone and sinew of the profession, they are the listeners.

In view of these facts there should be no hesitation about organizing a county medical society because its membership would be small. Well, then, after we shall have com-

pleted an organization in the one-hundred and twenty counties in the commonwealth, how shall we keep them organized?

Can the problem be solved in a nut shell? Easier things have proven hard to solve. We must do that which will bring harmony instead of discord; therefore our attitude toward each other must be the right one. "Love the brethren" reads well on paper, as it is fine in practice, for we cannot dislike anything or anybody without receiving the return wave, the responding vibration. It has occurred to me, and the idea may be as one-sided as the jug handle of the parable, that if we sit calmly down, like a silent sail upon a summer's sea, after expending the vast amount of energy which has been done in organization, and treat each one alike, the old as well as the new-born, society, as a refined and dainty flower, when there is as much difference as we see in the dissimilarity of twins, some, if not much of the work already done, must again be given a new birth.

Church unity at present is only a dream, because each brother after looking hard at his neighbor on the other side of the street, wants him to believe as he does, and as he will do nothing of the kind all the solemn courtesies and brotherly correspondence which has been gone through means nothing; but with our profession we have agreed to agree; we are a unit, we correctly understand each other; we desire to live day by day aright, that self shall sink into insignificance and that the good, the happiness, the welfare of others shall come first. When goodness, however, separates itself, it is only half good. How shall we keep good, that is, how shall we maintain and make continuous our county organizations? How shall we so interest the members as to cause them to be punctual in attendance at the monthly sessions? Fair speeches are all very well, but not if they help us to err, when we might do better. The average attendance at a county meeting is about one-third of the society's membership. This is considered a good percentage of attendance.

I am of the opinion that the first course to pursue to insure an attendance is to have an efficient secretary, one who can write intelligently, whose heart is in the work and who will attend strictly to business; who is willing to let his own affairs go awry rather than to miss a meeting, knowing as he does that his presence is of so much importance that his absence would produce scenes of confusion.

If he is a stenographer and will report, in brief, the speeches made in discussion, the fellows will return, if for nothing else, to hear the wise sayings they may have uttered on a previous occasion. I say, "may have uttered," because a good reporter always edits and improves impromptu speeches. I have seen and know, full well, a few of this kind; they are pleasant fellows, tactful, resourceful and are willing for self-effacement.

The next thing of importance is to arrange an attractive program. This part of the proceedings is woefully neglected according to my experience. The question of subjects is the last mentioned at a society meeting. When attention of the president is called to it, if the regular committee is not present, which is often the case, two or three members are called upon to go into an ante-room and choose a subject. They feel like lost sheep gone astray. In a haphazard way, with no thought at all, the Committee reports, and in seven times out of ten the chosen subject never will be touched by the assigned essayist. Programs should be planned well in advance and should represent variety. Having secured the Secretary and the program what is next? In human beings who do much work, as does the doctor, there must be great vital force, the furnace must burn well, and it seems to follow that it must take in plenty of fuel. A nice little supper for the boys, on occasion, let them munch buns and sandwiches together, is a wondrous cement, and moreover, if they will take it in an apostolic way, and under the cover of magic lantern darkness, a little of the juice of one of the cereals will aid digestion and good fellowship. Confidence begets confidence. At these re-unions, talks of practice, the amount added to the wampum belt, monthly or annually, the relation of successful cases may be indulged in—the unsuccessful may be held in reserve. It is a particularly pleasing feature of our profession that among the dead there is a wise or good natured discretion which prevents their ever complaining of the doctor who assisted them over the Styx? Monotony must be avoided. Monotony is pleasant in itself, morally pleasant and morally useful. Marriage is monotonous, yet there is much to be said in favor of holy wedlock; but monotony must never prevail in a county society. Variety is the spice of medical life.

Having said this much, or rather so little, upon this part of my subject of how to interest the members, I do not know what further

to suggest unless it be that the president of each county society be urged to drop into poetry, as did Silas Wegg. Down deep in the primitive subconsciousness of every doctor is a rhythmical instinct. To arouse that instinct, to hypnotize the members, as it were with mental suggestion, we have but to talk in poetry. The original shepherds, whoever they were, always sang to their flocks.

To maintain the organization, to make it last, which will be to make it interesting, will require the unremitting attention for a long time of the powers that be, the Councillors and the co-operation and determination upon the part of the members. Stand together. Let no selfish purpose find a place in any bosom or be allowed to influence any in the discharge of duty; be united and stand fast together and it will be impossible to estimate the result for good. Little acts of kindness, little deeds of love find a lodgment in the heart that swells with emotion with every mention of the name.

Be ethical, be honest; remember thou shalt not covet thy neighbor's patients. Despise every unfair act which may promise to raise you at the expense of a rival.

It is said that a certain young lady dreamed one night recently that she died, and when she asked admittance at St. Peter's gate he gave her some chalk and told her to go along the walls of the golden city until she came to a blackboard where she was to write her sins.

On the way she met a friend who had always passed as a good church member, and upon asking him where he was going, he replied that he was "goin' after more chalk."

There are a number of county society members who benevolently remain at home to catch the patients of the brethren who are away attending a county or state society meeting, and, who, inadvertently, forget to mention "the seizures made" after the return of the regular attendants; they have, also, the habit of never coming from their hiding except when there is a "feed," or some illustrious doctor is present—a Councillor, for instance—these will need a barrel of chalk to write down their short-comings.

We must not forget, in this review, that all of the regular physicians of this state are not members of this association by at least one-fourth. This is an unvarnished fact, and it is also a fact that there isn't a respectable physician in any county who doesn't want to be numbered with the brethren, and each

of the unnumbered does his level best to keep the people from knowing that he is not associated with the local society. I cannot comprehend why every one doesn't avail himself of the privileges that membership in his local society would give him. It is not from economical reasons; it is not good business, but bad luck to him. For instance: First class life insurance companies will not give employment to any practitioner who is not regularly enrolled in his county society. He cannot get admission into the army or navy; he cannot be a member of any Health board, and when the Asylums and penitentiaries are removed from the hands of the politicians, which they will be in some good day, then it will be that the officers of these institutions will be selected from competent men in county societies, and no one else.

The card index system when introduced in our state will help interest the members of the profession, who do not hold membership in a county society and will be the means of bringing them into membership.

It is also legitimate to use the press to educate the public to the lofty and high ideals of the profession. The county paper is a first class medium to set before the public the reason for our organization, and it would not be long before the people would understand and become our strong supporters, and the doctor who is not a member of his county society would have to "come in or move on." The cry of persecution, which has availed, with some, in the past, would be, in the future, like the horse, a vain thing for safety.

Chronologically, I next should speak of The Bulletin of the Association, (Our Bulletin) whose name, by the by, should be changed to "The Kentucky State Journal of Medicine," for the reason the designation, "Bulletin," is not distinctive enough, nor in keeping with other states that are publishing official weekly or monthly journals. Our pride should be commensurate with our importance. The initial number of the Bulletin made its appearance in the month of June, last past, and regularly has it come, every month, to the table of the members, giving to them, not only the papers which were read, and the discussions which followed their reading, at the Louisville session, but the acts of the various committees, the reports of the county societies, and all other matters of interest, legislative and otherwise; in fact, it has kept each member in touch with the progress of twentieth century medicine. All hail

to the editor who has so successfully conducted it. From the many whom I have heard speak of it the Bulletin has given satisfaction, at least, as pleasing as the annual volume of transactions formerly published by the society. My opinion is that the Bulletin has admirably subserved its purpose, that of communicating and rendering knowledge more accessible and useful. Its story would not be complete without mention of the fact that from a financial point of view it has not been disappointing.

To borrow a phrase from the street, "there will be something doing," in the House of Delegates during the 49th annual meeting. Doubtless there will be made a few changes in the Constitution and By-Laws. Some amendments have been already proposed, their object being not to make serious changes but merely to give to the Association the interpretation which was originally intended by the framers of the law. Possibly a few minor changes should be made that good may result therefrom. Some have complained that the Constitution and By-Laws, as framed, are complex in some of their provisions. If this is the case, we should go about the revision of the work calmly and dispassionately, and make no sweeping or radical reforms. We cannot make the laws perfect in one year, time will be the element of cure. Revisions thought to be right and proper by us may not please our successors. We should have the moral courage to make haste slowly. Scrub a kettle until it is clean, is a good motto, but not until it leaks. Change here a little, and there a little annually, and in the course of a few years a Committee must of necessity be appointed to codify the laws just to see where we are. As we have before remarked, if changes are necessary, let them be made. To employ a homely simile, the spokes introduced must be slight but strong and firmly set in the hub. The bad dramatist is he who introduces extraneous matter; the good dramatist is he who wastes nothing.

I would be derelict were I to omit mention of the State Board of Health of Kentucky, an integral part of this Association, and of which we are very proud. That which it is doing, which it has done and which it will do in the future, for the profession and for the people, cannot be expressed in sordidness, it is incalculable. Public health is public wealth. Health and wealth are reciprocal terms. Give health and wealth to a nation, state or

municipality and general prosperity will be the result. Preventive medicine is the momentous question of our time. The "State Board," ever alert for the welfare of the people, is now taking particular pains to see that every one keeps well; that is it has put a veto upon the itinerant doctor and his blare and trumpets. The enactment of recent laws, secured through the labors of the Board has given the profession a great advance over previous conditions. An event of the greatest importance is the institution of state examination for license to practice the healing art. When this is put into actual practice, the recipient of state license will know and feel his good qualities; that he has passed the ordeal of his Alma Mater, that he has obeyed the law of the state in its letter and its spirit and that he has the proud privilege of going forth to practice the noblest of all professions. Many other things which these public servants have done for the profession, and for the people's good might be enumerated, but these are, or should be, public property; therefore, of them, I will not further occupy your attention, except to say, that the people generally do not understand it or at least, if they do so, do not appreciate the fact, that they are indebted to the medical profession not only for the care and attention which they receive from them, but in the security which comes from the Boards of Health, of the counties in which they are living, from the ravages of contagious diseases.

It is with the deepest sorrow and profoundest regret that I am impelled to record, in this Review, the decease of two devoted members of this Association, who, in life, typified David and Jonathan in Central Kentucky medicine. Friends they were, real chums, comrades. It was refreshing to see these gentlemen greet each other, there was so much heartiness and cordiality about it. One died in December, 1903, the other in April, 1904. Words fail to portray their true characters. The grand old name of gentleman was never more nobly borne than by Dr. Hawkins Brown, and there never was a physician more respected, a man more deservedly admired and loved than Dr. Henry Plummer. The language Carlyle applied to his father is singularly appropriate. He says, "As for the departed, we ought to say he was taken home like a shock of corn, fully ripe. He had finished the work given him to do and finished it as became a man." This is

literally true of our friends.

Doctors Brown and Plummer were not voluminous writers and the contributions to medical literature from their pens were of a practical character, but they did what they could, they were loyal to their guild. Peace to their ashes.

And now disclaiming any expectation of having instructed or edified this audience, I will bring these remarks to a close. "Reject what in them is false, examine what is doubtful, remember what is true."

Our duties are arduous, peculiar and responsible, no illegitimate considerations should divert us from their strict performance.

If the Physician's best services are not always appreciated and rewarded, if he may never hear the resounding applause of the populace which follows the spasmodic efforts of the orator or statesman, nor his pathway be strewn with flowers like the returning conquering hero, yet if he has conscientiously tried to do his whole duty to those committed to his care, when he comes to give up his stewardship he may hear the welcome plaudit, "Well done, thou good and faithful servant."

SCARLET FEVER.

By C. H. Todd, Owensboro, Ky.

It is said that every four years an epidemic of scarlet fever occurs in the City of London, which fact has been noted for more than a century.

Certain atmospheric and telluric conditions seem to be essential for the occurrence of an epidemic of scarlet fever, and certainly such conditions are necessary for its spreading in any community into which a single case has been admitted. And as illustrative of this fact, I can recall notably two instances that occurred in this City twenty years ago, when the parents of two families and their nursing children visited Evansville, and ten days after returning home both the nursing children were attacked with scarlet fever, while the other children in both families escaped at the time, and had the disease the following year when it was epidemic in this city.

A typical case of scarlet fever should be easily recognized, the crimsoned fauces and pharynx, the high fever from twelve to thirty six hours, followed by a bright scarlet eruption appearing first on the neck and breast, then over the

body, which fades at the end of 5 days, to be followed by the third or desquamative stage of three to six weeks duration.

It is very difficult to diagnose some cases of Scarlet fever during the eruption from measles, small pox and urticaria.

If the fever continues after the eruption has faded, it is due to some sequela that occurs during the desquamative stage; as sore throat, corvza, otorrhoea, diarrhea, abscesses, bronchitis, pneumonia, rheumatism and renal dropsy.

Scarlet fever is often the mildest of all the eruptive and contagious diseases, and then it may be the most malignant and rapidly fatal of all diseases, death occurring in a few hours.

Scarlet fever is often so mild during the fever and eruption as not to attract the attention of the patient or family, until followed by some sequelae during the desquamative stage.

It has been my experience that renal dropsy occurs more frequently in the mild cases from the fact that the illness, is considered of little consequence, and the patient is not protected from exposure during the stage of desquamation.

For the successful treatment of scarlet fever, it is a matter of the greatest importance that we should comprehend and appreciate the physiological fact that 5-6 of the excretions of the human organism pass through the skin.

The sanitation should be perfect as scarlet fever is a filth disease.

Let the patient have all the sunshine and pure air possible.

It must be conceded that the proximity of a pig pen is obnoxious, and yet soap suds thrown out the back door are equally as pernicious.

Some years ago it was discovered that the malignant scarlet fever prevailing in the palaces of the millionaires of New York City, was due to the escape of sewer gas from the wash stands in the sleeping rooms.

While unsanitary surroundings influence the type of scarlet fever, the individual who has a hereditary cachexia is an unfavorable subject for the disease under the best sanitation.

It is my custom in every case of scarlet fever to lubricate the patient with lard during the fever and eruption, how-

ever mild the case may be, and to warn the family of the danger of the sequelae that may occur during the stage of desquamation.

In the severe cases I use the lard more freely and also give whisky in large doses.

I was called at night, Dec 17th, 1879, to visit three children ill with scarlet fever at Enterprise, Indiana, and arriving at daylight, found that the two sisters 14 and 18 years old had died during the night, and the brother aged 16 years comatose and cyanotic; temperature 105 and pulse too rapid to count. The two girls were ill 24 hours and had convulsions, and the boy was taken with fever the evening before. At once the boy was placed between four blankets, with an oil cloth below and above, and rubbed with lard and bottles and jugs of hot water placed between the blankets, and given 6 ounces of whisky by rectal injection. The diaphoresis was rapid and immense. Every 15 minutes he was rubbed dry and the lard and hot water renewed. The whisky was repeated every hour for the third time.

In a few hours the eruption was profuse over the whole body and by noon the boy was conscious and recovered.

One hundred feet south of this residence was a foul pig pen that had been in use for more than a year.

Today in addition to the treatment used in this case, I would have given the normal salt solution by subcutaneous injections.

The manner of treating malignant scarlet fever with lard and bottles of hot water and whisky, was first advocated twenty-five years ago by a Russian physician, which gave him great celebrity, and absolutely nothing has since been added to this treatment except the normal salt solution.

The lubrication with the lard and the bottles of hot water, locally stimulating the skin, produces free diaphoresis, and by this increased output of excretions all cell life is revived and aroused, which is being overwhelmed by the materies morbi of the disease circulating in the arterial blood.

The whisky has a double effect, as it is a most potent antiseptic as well as a

stimulant, and by its antiseptic properties corrects the fermentation in the arterial blood which the materies morbi of the disease has produced, and also stimulates the organic or great sympathetic nervous system which controls all metabolic action.

The normal salt solution arouses and revives all cell life in a molecular manner thereby increasing metabolic action, and thus eliminating the materies morbi of the disease by increased excretion.

Let me enter my solemn protest against the use of any of the coal tar derivatives in the treatment of scarlet fever, for they are of no benefit but are actually dangerous.

While the coal tar derivatives will reduce the high temperature in scarlet fever they do so at the expense of the organic or great sympathetic nervous system; nor do they revive or arouse cell life, because they do not eliminate or affect in any way the materies morbi of the disease in the arterial blood, which arterial blood feeds all cell life.

The increased temperature in scarlet fever is an index that metabolism is disturbed, and is the result of the struggle of the organic or great sympathetic nervous system against the materies morbi of the disease in the arterial blood, and this increased temperature is compensatory or protective, if in moderation.

What an immense pyramid could be erected out of the samples of the many, many thousand synthetical compounds that have been distributed by agents in the last few years to the medical profession in America! but put this epitaph on that pyramid, "Don't use these remedies as the treatment of scarlet fever!"

Now in conclusion pardon me when I tell you it is my firm conviction that a new era in medicine is dawning upon us; for soon will be universally accepted the fact that physical life is a chemical action of resolution, and that each cell in the human organism is composed of a number of molecules, a typical gas, possessed of many properties. When accepted this will result in the modification of our conception of the germ causation of disease.

REPORT OF THE PROCEEDINGS OF THE HOUSE OF DELEGATES.

The House of Delegates was called 'o order at the Phoenix Hotel, in Lexington, Tuesday, May 17, at 8 o'clock.

The report of the secretary and of the treasurer were received and adopted and are appended hereto. The reports of the councilors of the several districts were next received.

Several amendments to the by-laws proposed last year, and additional amendments proposed this year, were referred to a special committee of three, composed of Dr. Wm. Bailey, Dr. J. E. Wells, and Dr. T. J. Shoemaker, this committee to report on Friday morning.

Meeting of the House of Delegates Wednesday Morning, May 18, at 9 O'Clock.

The question of the seating of alternates came up. It was pointed out that the constitution and by-laws does not provide for the election of alternates. A motion, however, was made and carried, that those present in the capacity of alternates be seated as delegates, with the distinct avowal upon the part of this meeting that this is not to be regarded as a precedent.

On motion of Dr. Ancil Price the following Nominating Committee was appointed: Drs. Spurgeon Cheek, E. E. Hume, C. Z. Aud, J. N. McCormack, W. A. Quinn, Silas Evans, P. C. Layne, I. A. Shirley, J. A. Lock, and J. G. Carpenter.

Dr. R. C. McChord offered the following motion, which was unanimously carried: "Knowing that Dr. John A. Lewis lies very sick at his home in Georgetown, I move you, Mr. President, that this House of Delegates communicate to him our deep regret at his not being able to be present with us. I do not believe any man ever knew Dr. Lewis but that he was better because of that acquaintance." This resolution was unanimously carried, and the secretary was instructed to communicate the resolution to Dr. Lewis.

The secretary stated that considerable difficulty had been encountered by county secretaries in collecting dues from members by the time specified in the present by-laws, namely, April 1st. He therefore suggested that the annual meeting should be held in the fall rather than in the spring. A further reason urged in favor

of this was that the American Medical Association meets so soon after the State meeting that some of the members are unable to attend both meetings and so remain away from either one or the other. A motion was made that the time of meeting be so changed and this was referred to the same committee considering the amendment of the by-laws, to be reported upon Friday morning.

The chairman of the Legislative Committee presented his report. The President appointed the following Auditing Committee: Drs. E. Alcorn, E. E. Hume, and W. F. Boggess.

Adjournment.

Meeting of the House of Delegates May 19, 1904, 8:30 a. m., Dr. C. Z. Aud in the chair.

The secretary offered the following: "Two members of the Nominating Committee are absent and to fill these vacancies I move that we appoint Dr. M. W. Rozzell from the First District, and Dr. A. D. Price, from the Sixth District." This motion was unanimously carried.

The Auditing Committee returned the following report: "We, the committee appointed to audit the accounts of Dr. W. B. McClure, Treasurer, find after examining the credits and debits, that his report is correct to one cent. The office held by Dr. McClure is no sinecure, and we take pleasure in saying that he has discharged his duties faithfully and well. Signed, Edward Alcorn, W. F. Boggess, E. E. Hume." The report was accepted and the committee discharged.

The secretary called attention to the statement contained in the May number of the Bulletin with reference to forming an association of State medical journals. On motion of Dr. A. D. Price the House of Delegates endorsed the proposition, and Dr. James B. Bullitt was appointed a delegate to represent the Kentucky State Medical Association at the proposed meeting at Atlantic City.

At the request of Dr. A. O. Pfingst a resolution was offered endorsing the work done by Dr. Frank Allport in regard to the introduction of simple, effective and practical means of detecting ocular and aural disease in their incipency among the pupils of our public schools, which are capable of application by the teachers. The resolution is as follows: "Whereas, the value of perfect sight and

hearing is not fully appreciated by educators, and neglect of the delicate organs of sight and hearing often leads to disease of these structures, therefore be it resolved, that it is the sense of the Kentucky State Medical Association that measures should be taken by Boards of Health and Boards of Education and school authorities, and where possible, legislation be secured, looking to the examination of the eyes and ears of all school children, that disease in its incipency may be discovered and corrected."

Dr. B. L. Bruner introduced the following resolution relating to criminal abortion: "Whereas, the crime of criminal abortion is so prevalent in this Commonwealth, and Whereas, the existing laws upon the same are so lax, therefore be it Resolved, that there be a committee appointed by this House of Delegates which shall draft suitable laws and amendments to existing laws bearing both directly and indirectly upon such crime, and present same to the next General Assembly; and that said committee be empowered to use every legitimate means to secure the amendment of said laws." An amendment was offered by Dr. J. N. McCormack that the matter be referred to the regular Legislative Committee, and that Dr. Bruner be put on said committee. The motion as amended was unanimously adopted.

The report of the chairman of the Board of Councilors was received.

Dr. A. T. McCormack moved that an additional orator be added on the subject of Medical Organization to deliver an annual oration along the lines of the preamble of the American Medical Association. This was referred to the Committee on By-Laws.

Meeting of the House of Delegates, May 20, 8 a. m.

The report of the Nominating Committee was received, being read by Dr. W. A. Quinn, as follows: Nominees for President, F. H. Clark, Lexington; H. K. Adamson, Maysville, and G. M. Reddish, Somerset. For Vice-Presidents—L. L. Robertson, Middlesboro; A. S. Cook, Monticello, and Buckner Littlepage, Clay City. For Councilors—A. T. McCormack, Bowling Green, for the Third District, and J. S. Lock, Barbourville, for the Eleventh District. For Orator in Medicine—J. F. McClymonds, Lexington.

Orator in Surgery—Louis Frank, Louisville. Delegates to the American Medical Association—J. N. McCormack of Bowling Green, for two years, and A. D. Price of Harrodsburg, for two years. Delegates to the Mississippi Valley Medical Association—T. Hunt Stucky, Louisville, for two years, and Dr. Curran Pope, Louisville, for one year. Names to be presented to the Governor from which to make appointment to fill unexpired term on State Board of Health: W. A. Quinn of Henderson, L. L. Robertson of Middlesboro, and W. W. Richmond of Clinton.

On motion of Dr. J. G. Carpenter, the secretary was instructed to cast one ballot for the nominees for all offices, except that of President. Dr. J. E. Wells and Dr. C. D. Mansfield were appointed tellers by the Chair. Dr. W. F. Boggess nominated from the floor Dr. William Cheatham, of Louisville, for President. A ballot for president was then taken and Dr. F. H. Clarke of Lexington, was found to have received a majority of all votes cast. On motion of Dr. W. F. Boggess, Dr. Clarke's election was made unanimous.

The Committee on By-Laws, Dr. William Bailey, chairman, made report recommending the adoption of the new draft of by-laws. The report of the committee was accepted and the new by-laws were adopted. They are appended.

The following resolution was offered by Dr. A. D. Price, was amended by Dr. A. T. McCormack and was unanimously adopted: "Whereas, it is reported to this Association that physicians who are not members of the Association are applying for positions as life insurance examiners, and for other positions, alleging that they hold membership in the Kentucky State Medical Association, to the injury of the reputation of this body and its members; Therefore be it Resolved, that it is the sense of this Association that no member should recommend a non-member as insurance examiner, or for any other professional position."

The following resolution was offered by Dr. A. T. McCormack and was unanimously adopted: "Be it Resolved that the thanks of this Association be extended to our retiring and beloved President, Dr. Steele Bailey, for his untiring efforts in his work for the profession of Kentucky, and for the courtesy and efficiency

with which he has discharged the duties of his honored office at this session. And be it further Resolved, that the Association express its obligations to the Fayette County Medical Society and their ladies, and to the good people of Lexington who have received and entertained our members with such open-armed Kentucky hospitality."

On motion of Dr. J. N. McCormack the secretary's salary was fixed at \$500.00 per annum. Dr. W. A. Quinn offered as an amendment that the amount be increased to \$600.00, \$50.00 per month. This motion was carried.

A committee of two, consisting of Dr. William Bailey, of Louisville, and Dr. J. T. Reddick, of Paducah, was appointed to escort the new President to the chair.

On motion, the House of Delegates adjourned to meet in October.

SECRETARY'S ANNUAL REPORT.

This report will relate briefly the present status of organization of the counties in the State of Kentucky, and will then show the cost of publication of the Bulletin of the Kentucky State Medical Association for the past year.

There are 119 counties in the State of Kentucky. Organization of the medical profession is reported from 92 of these counties, while in 27 counties no organization has been effected. Twenty-one counties reported organization this year which did not report in 1903, while four counties are reported in 1903 which failed to report this year. These 92 organized counties show a total membership of 1,385. It must be understood that this number of members are in good standing, that is, they have paid their annual dues to both county society and State Association, and have fulfilled all obligations of membership to both bodies.

A large number of the 27 counties not yet organized are in the mountain section of Kentucky, where conditions are difficult, and where doctors are few. The failure to report of at least one of the delinquent societies was entirely due to the neglect of a dissipated secretary. In 1903 the membership was 1,038, so that the increase during the past year is 347. While this is not as large as it should be, it is

still quite substantial and represents a number almost as large as the entire membership of the State Association before the new plan of organization was adopted.

The largest part of the secretary's work has consisted in the editing of the Bulletin of the Kentucky State Medical Association. It has gone to all of the members of the Association and they are familiar with its character and scope. The Publication Committee feels that the Bulletin is not all that it should be, but at the same time believes it has done the best that could be done under the circumstances, and has no apologies to offer for any shortcomings which may be manifest.

The total cost of twelve issues was as follows:

For printing	\$1,012.80
For postage	343.35
Total cost	\$1,356.15

There has been received for advertisements in this time \$850.31. So that the net cost of the Bulletin for the year has been \$505.84.

It will be observed that the cost of postage has been excessive; this is owing to the fact that the Bulletin has, so far, been refused entrance to the second class of mail matter. Had this been allowed, a considerable further reduction in cost could have been reported, so that the year's expense on account of publication would have been somewhere between \$200.00 and \$300.00.

JAMES B. BULLITT,
Secretary.

TREASURER'S ANNUAL REPORT.

Lexington, Ky., May 16, 1904.
To the Kentucky State Medical Association:

As Treasurer of this Association I would respectfully report the following as the state of the finances hereof at the end of the day on Monday, May 16th, 1904:

DEBTOR.

To amount received from my predecessor, Dr. Steele Bailey	\$2,182.02
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To amount received on account of "Bulletin," the publication of the Association	808.51
To amount received as dues from the various County Societies, and from Exhibitors at last meeting of the Association	2,503.15

Total receipts \$5,493.68

CREDITOR.

By amount paid on "Bulletin" publishing and stationary account	\$ 972.81
By general disbursements (including expenses of last annual meeting, stenographer hire for Secretary, stationary and stamp account of Secretary and Treasurer and dues to American Medical Association)	1,845.95
By amount on deposit in Third National Bank, of Lexington, Ky.	2,674.92

Total credits \$5,493.68

W. B. McCLURE,
Treasurer.

KENTUCKY NOTES.

The following circular letter is self explanatory:

Louisville, Ky., May 26, 1904.

Drs. George and Ernest Rau will retire from the management of Beechhurst Sanitarium June 1st. Both of these young gentlemen had served satisfactorily with my brother—the late Dr. Barton W. Stone; and I trust will meet with that success in the future they deserve. I wish to publicly testify to their worth and ability.

Dr. B. F. Eager, of Hopkinsville, Ky., will assume the Superintendency of the Sanitarium at that time, assisted by such help as he may select after entering upon his duties. He has had fifteen years experience in nervous troubles, associated with the late Dr. James Rodman and Dr. B. W. Stone. He is not unknown in Western Kentucky where he has lived and worked for twenty-seven years along this line and in general practice.

It will be his purpose to make the Institution serve the high aim of its founder, to sustain the reputation it has attained up to the present—to make it a high grade hospital for the care and cure

of those seeking its help and a pleasant home for all within its walls. In harmony with this purpose I shall lend every aid in my power, especially in the domestic department, assisted by my daughter, Miss Kittie Johnson, to realize this hope and make the work a success.

We expect to have the most cordial co-operation in every department in ministering to the wants and comforts of our patients and their speedy restoration to health and home.

We are grateful for the wide and liberal patronage in the past, and shall endeavor always to deserve the full confidence of our patrons in the future.

Respectfully yours,
MRS. C. W. JOHNSON.

THE PRESIDENCY OF THE AMERICAN MEDICAL ASSOCIATION.

Kentucky, Kentucky medicine and Kentucky doctors have been again signally honored by the profession of the United States in the person of Dr. Lewis S. McMurtry who was elected President of the American Medical Association at the recent meeting in Atlantic City. This is the most substantial honor which can come to a member of the medical profession, and is exactly comparable in its own way to the honor of being President of the whole United States.

Those who know Dr. McMurtry, his good work and solid scientific ideals and attainments, as well as his notable services to the American Association throughout a period of many years, will appreciate the appropriateness of the selection. On the other hand, Kentucky doctors may rest assured that they will be represented by a man who will do honor to them and the Association, both as a leader and director of scientific thought and effort during the coming year, and as a finished and tactful presiding officer at its close.

Dr. McMurtry's election was the more notable and honorable in that he defeated for the office one of the most distinguished and popular members of the American Medical Association, a man with a reputation which extends far beyond the confines of his own continent, who is admired by all for his scientific achievements and loved by his friends as the best of modest gentlemen, Dr. William J. Mayo, of Rochester, Minn.

KENTUCKY MEDICAL JOURNAL

BEING THE

JOURNAL OF THE KENTUCKY STATE MEDICAL
ASSOCIATIONPUBLISHED MONTHLY UNDER SUPERVISION OF THE
COUNCIL**Subscription Price One Dollar per Year.**

CHAIRMAN OF COUNCIL

DR. JOHN G. CECIL

SECRETARY-EDITOR

DR. JAMES B. BULLITT

ASSOCIATE EDITORS

DR. J. A. FLEXNER

DR. IRVIN ABELL

DR. ADOLPH O. PFINGST

THE KENTUCKY MEDICAL JOURNAL.

With this issue the publication of the Kentucky State Medical Association begins its second year. It will be noted that the council has deemed it wise to change the name from "Bulletin" to Kentucky Medical Journal, being the Journal of the Kentucky State Medical Association. It will be remembered that the publication was begun a year ago in some fear and trembling, and as something of an experiment. A year's experience makes the editors confident that the publication can be made a success, from both the standpoint of a medical publication and as a business proposition. As has been pointed out from time to time, one serious difficulty has been the fact that entrance was denied to the Bulletin to the second class of mail matter. This resulted in an additional expenditure of about \$300.00 during the year, and necessitated keeping the Bulletin down to the limit of thirty-two pages. It is believed this difficulty will soon be overcome, and that the Kentucky Medical Journal will be able to assume proportions which will be in harmony with its importance.

The editors of the Journal propose to make it the best medical Journal which is, or can be, published in the State of Kentucky. There is absolutely no reason why this should not be done. No other journal published in the State of Kentucky can ever have the same backing which the Journal of the State Association has, and, therefore, it is simply a question of intelligent industry as to whether or not the goal above set forth can be reached.

In order to further this object the assistance of Dr. J. A. Flexner, in the department of General Medicine, Dr. Irvin Abell, in the department of General Surgery, and Dr. A. O. Pfingst, in the special departments of Ophthalmology, Laryngology, Rhinology and Otology has been secured, and these gentlemen will serve as associate editors in the

respective departments mentioned. The Journal further proposes to secure during the year signed editorial articles from all the prominent men in the State of Kentucky who are members of the State Association, and believes that this will add materially to the value and interest of the publication.

As has been stated before, it is particularly desired that the county society secretaries should furnish interesting and newsy reports every month, giving details of meeting, county news in which medical men are interested, such as deaths, births, marriages, the unusual prevalence of any particular kind of disease, etc. It is also desired that interesting papers read before county societies should be sent to the Journal for publication, accompanied, if possible, by an abstract of the discussion which such papers may have elicited. In order to insure reports from the county secretaries each county society will be requested to pass a resolution directing its secretary to make such a report to the Journal of the State Association monthly, or at least as often as meetings are held, and at the same time to declare the Journal of the State Association the official organ of the respective county society. The Journal is naturally and of necessity the official organ of the county societies, but it is desired to have formal recognition of this fact on the part of each of the county societies.

THE FORTY-NINTH ANNUAL MEETING OF THE KENTUCKY STATE MEDICAL ASSOCIATION

held at Lexington May 18, 19, and 20th, may be recorded amongst the most successful the Association has ever held. While the attendance was not so large as at Louisville last year, it was still large, and especially to be noted was the fact of the large representation in the House of Delegates. Many counties, which never before have had any representatives at the State Association meetings, had delegates on hand anxious to take part in the material legislation of the House of Delegates. Last year the machinery was new and in consequence some creaking was manifest. This year affairs, both in the House of Delegates and in the general scientific meetings, flowed along very smoothly and evenly. In the House of Delegates business was despatched promptly and without unnecessary haranguing, and in consequence the meetings of this body interfered almost not at all with the scientific meetings.

The program embraced only twenty-seven papers, but even with this small number it was found impossible to keep up with the program. This was largely in consequence of the fact that members do not appreciate the importance of convening promptly and despatching the scientific program in a business-like way. Members still insist on holding small meetings of their own at the back of the hall, and in the lobby outside, and actually have to be driven in before enough members are present for the presiding officer to have the face to request the essayist to proceed.

Just here the Journal feels that it should call attention to that nuisance which is more or less conspicuous at every meeting of the State Association, the man who will persist in standing up at the back of the hall and talking in a more or less audible voice to some other individual who is equally thoughtless and discourteous. There can be no excuse for this kind of nuisance. If gentlemen must talk they should go to some secluded spot where they will disturb no one else. It would be much better for them to postpone entirely such conversations until the interval between the sessions, as it is practically certain that everything which is said on such occasions would not be spoiled by having to wait a half hour, or even an hour. The virtuous members who sit in their seats and pay the essayists the compliment of listening to what they have to say, feel very indignant over this matter, and very much like rising in their might and throwing the offenders out of the door, and it is even possible that this may some day happen.

In a general way it may be said that the discussions before the Association are growing better, and that each succeeding year may reasonably expect to see a continued improvement in discussions, both as to numbers taking part, and in the matter of the discussion itself. The Journal would lay stress on the stand taken by the Committee on Program, that the program should be gotten up with the idea of developing the members of the Association throughout the State. The discussions before the Association are not for a limited and favored few who have already shown themselves well able to read papers before the State Association, and to take part extemporaneously in the discussions. While gratefully accepting and acknowledging the help of those who can, and oftentimes will speak, at the same time it must be in-

sisted that others who have not yet had an opportunity to try the strength of their wings in discursive flights before the Association, should each year be encouraged to do this, so that as the years go by, the Kentucky doctor, from whatever part of the State he may come, may still be able to keep up the somewhat deserved reputation of being able to hold his own with the best of them when it comes to using either the knife or the tongue.

MEMBERS OF THE STATE ASSOCIATION AND INSURANCE COMPANY EXAMINERS.

Attention is particularly directed to the resolution passed by the House of Delegates to the effect that no member of the Kentucky State Medical Association should recommend any physician to an insurance company as examiner for such company, unless the person seeking such recommendation is a member of the State Association. This resolution was adopted by the House of Delegates for the reason that insurance companies all over the country are insisting more and more each year that their examiners shall be members of the State Association. Their insistence is based on the fact that the best men in the profession in each community are members already of the State Association, and such membership is to some extent a guarantee of the standing and attainments of the member. On the other hand, it has been found out that physicians desiring to secure appointments of this kind have made representations to the insurance companies that they were members of the State Association and of the American Medical Association, when, as a matter of fact, they were members of neither the one nor the other. Under the new plan of organization it will no longer be possible for physicians to hold membership in the American Medical Association unless they are at the same time members of the State Association.

The fifty-fifth annual meeting of the American Medical Association, which was held at Atlantic City, June 7-10, was the banner meeting of that association from every standpoint. The number of members registered was more than 2,800, while never before in the history of the Association had the attendance been larger than 2,000. The Journal for July will contain several articles from the pens of Kentucky doctors giving their impressions of the meeting and the good to be derived from such gatherings.

ROSTER OF COUNTY SOCIETIES.

COUNTY	PRESIDENT.	SECRETARY	DELEGATE.	NO. OF MEM.
ADAIR-RUSSELL	U. L. Taylor, Columbia	J. S. Rowe, Jamestown	J. B. Scholl, Jabez	10
ALLEN	M. Whitney, Gainesville	A. L. Wagoner, Scottsville	W. E. Meredith, Scottsville	6
ANDERSON	C. W. Kavanaugh, Lawrenceburg	J. M. Jennings, Tyrone	C. W. Kavanaugh, Lawrenceburg	8
BALLARD	J. W. Meshew, Barlow City	W. A. Page, Barlow City		15
BARREN	To be reported			7
BATH	W. E. Phillips, Wyoming	F. P. Gudgell, Owingsville	B. Cornelison, Owingsville	9
BELL	M. Arthur, Middlesboro.			9
BOONE	No organization reported			
BOURBON	Wash Fithian, Paris	C. G. Dougherty, Paris	Silas Evans, Paris	24
BOYD	J. D. Mitters, Rush	J. M. Salmou, Ashland	P. C. Lane, Ashland	20
BOYLE	F. H. Montgomery, Danville	Spurgeon Cheek, Danville	Spurgeon Cheek, Danville	14
BRACKEN	D. J. Wallin, Brooksville	V. E. Smith, Painesville	W. B. Wallin, Brooksville	9
BREATHITT	J. M. Kash, Jackson	Jas. P. Boggs, Jackson	Vauce Offutt, Jackson	7
BRECKENRIDGE	R. T. Dempster, Glendane	Jno. E. Kincheloe, Hardinsburg	Jno. E. Kincheloe, Hardinsburg	17
BULLITT	No organization reported			
BUTLER	W. P. Westerfield, Rochester		A. E. Gardner, Morgantown	8
CALDWELL	B. S. Coleman, Princeton	R. W. Ogilvie, Princeton	R. W. Ogilvie, Princeton	15
CALLOWAY	E. B. Curd, New Providence	W. H. Graves, Murray	J. G. Hart, Murray	15
CAMPBELL-KENTON	W. W. Tarvin, Covington	F. A. Stine, Newport	W. W. Renshaw, Covington	54
CARLISLE	E. B. Willingham, Cunningham	T. D. Bugg, Bardwell	W. L. Mosby, Bardwell	13
CARROLL	N. C. Brown, Ghent	F. M. Gauges, Carrollton	F. M. Gauges, Carrollton	10
CARTER	No organization reported			
CASEY	J. S. Wesley, Liberty	D. S. Floyd, Humphrey	J. T. Wesley, Millersburg	10
CHRISTIAN	H. H. Wallace, Hopkinsville	B. F. Eager, Hopkinsville	J. L. Barker, Pembroke	41
CLARK	T. S. Allen, Bloomington	I. A. Shirley, Winchester	I. A. Shirley, Winchester	12
CLAY	No organization reported			
CLINTON	W. F. Cartwright, Albany	J. A. Sloan, Albany	D. C. L. Shelley, Albany	10
CRITTENDEN	I. A. Clement, Tolu	W. T. Dougherty, Marion	J. O. Dixon, Marion	8
CUMBERLAND				2
DAVISS	J. P. Heaverin, Owensboro	J. J. Rodman, Owensboro	D. M. Griffith, Owensboro	55
EDMONSON	No organization reported			
ELLIOTT	" " "			
ESTILL	" " "			
FAYETTE	N. L. Bosworth, Lexington	D. J. Healy, Lexington	T. H. Kinnaird, Lexington	42
FLEMING	C. R. Garr, Flemingsburg	A. S. Robertson, Flemingsburg	J. C. S. Brice, Flemingsburg	12
FLOYD	No organization reported			
FRANKLIN	O. B. Demore, Frankfort	U. V. Williams, Frankfort	E. E. Hume, Frankfort	15
FULTON	W. W. Gourley, Fulton	S. Cohn, Fulton	H. E. Prather, Hickman	6
GALLATIN	No organization reported			
GARRARD	H. C. Herring, Lancaster	J. B. Kinnaird, Lancaster	W. G. Casenburg, Paint Lick	9
GRANT	N. S. Matthews, Williamstown	J. M. Viallet, Williamstown		18
GRAYSON	To be reported			
GRAVES	J. L. Dismukes, Mayfield	M. W. Rozzell, Mayfield	H. C. Duvall, Millwood	6
GREEN	O. H. Shiveley, Greensburg	Basil M. Taylor, Greensburg	M. W. Rozzell, Mayfield	9
GREENUP	A. S. Brady, Greenup	Frank Brady, Greenup	Basil M. Taylor, Greensburg	7
HANCOCK	No organization reported			
HARDIN	J. W. O'Connor, Elizabethtown	H. R. Nusz, Cecilian	C. Z. Aud, Cecilian	19
HARLAN	No organization reported			
HARRISON	Joe Boyd, Cynthia	J. M. Rees, Cynthia	Jos. Wells, Cynthia	21
HART	C. J. Walton, Munfordsville	J. J. Adams, Munfordsville	B. L. Bruner, Hardyville	11
HENDERSON	J. T. Bethel, Henderson	Wm. Forwood, Henderson	W. A. Quinn, Henderson	33
HENRY	C. R. Martin, Sulphur	J. P. Nuttall, Jr., New Castle	O. P. Chapman, Port Royal	24
HICKMAN	R. S. Killough, Spring Hill	Wm. A. Craig, Clinton	W. R. Moss, Clinton	13
HOPKINS	T. W. Gardner, Madisouville	A. W. Long, Madisouville	B. P. Earle, Charleston	8
JACKSON	No organization reported			
JEFFERSON	H. H. Grant, Louisville	H. E. Tuley, Louisville	J. B. Marvin, W. F. Boggess, Wm. Bailey, Louisville	179
JESSAMINE	Chas. Mann, Nicholasville	J. A. VanArsdall, Nicholasville	P. N. Welch, Nicholasville	9
JOHNSON	No organization reported			
KENTON	Included with Campbell-Kenton			
KNOTT	No organization reported			
KNOX	G. H. Albright, Barbourville	V. V. Anderson, Barbourville	J. S. Lock, Barbourville	13
LARUE	T. J. Potet, Hodgenville	E. S. Smith, Hodgenville	W. E. Rodman, Hodgenville	7
LAUREL	H. V. Pennington, London	Wm. Johnson, Brock	T. B. Caldwell, London	7
LAWRENCE	No organization reported			
LEE	M. F. Reed, Beattyville	J. H. Evans, Beattyville		6
LESLIE	No organization reported			
LETCHER	" " "			
LEWIS	L. A. Grimes, Concord	A. F. Hill, Vanceburg	A. F. Hill, Vanceburg	9
LINCOLN	J. W. Action, Kingsville	Steele Bailey, Stanford	J. G. Carpenter, Stanford	12
LIVINGSTON	No organization reported			
LOGAN	M. E. Alderson, Russellville	J. K. W. Piper, Russellville	M. E. Alderson, Russellville	25
LYON	J. H. Hussey, Eddyville	D. J. Travis, Eddyville	C. H. Linn, Kuttawa	4
MCCRACKEN	J. R. Coleman, Paducah	H. T. Rivers, Paducah	J. T. Reddick, Paducah	14
MCLEAN	R. L. Ford, Livermore	H. W. Gates, Calhoun		8
MADISON	C. H. Vaught, Richmond	Murison Dunn, Richmond	C. H. Vaught, Richmond	14
MAGOFFIN	No organization reported			
MARION	Chas. B. Kobert, Lebanon	R. C. McChord, Lebanon	R. C. McChord, Lebanon	21
MARSHALL	Jno. A. Jones, Altona	V. A. Stillely, Benton	E. G. Thomas, Harvey	21
MARTIN	No organization reported			
MASON	Alex. Hunter, Washington	A. G. Browning, Maysville	J. B. Taulbee, Maysville	20
MEADE	B. R. Walker, Garnettsville	J. R. Dink, Brandenburg	S. H. Stith, Ekron	9
MENIFEE	No organization reported			
MERCER	C. W. Sweeney, Bohon	W. D. Powell, Harrodsburg	A. D. Price, Harrodsburg	10
METCALFE	Jno. A. Yutes, Edmonton	H. R. Vanzant, Edmonton	Z. G. Taylor, Knob Lick	6
MONROE	R. F. Duncan, Tompkinsville	E. E. Palmore, Strole	O. P. Hamilton, Gamaliel	12
MONTGOMERY	J. F. Reynolds, Mt. Sterling	J. F. Jones, Mt. Sterling	W. T. Simrall, Mt. Sterling	13
MORGAN	B. F. Carter, West Liberty	B. F. McClure, Caney		3
MUHLENBERG	E. R. Yost, Greenville	C. E. O'Bryan, Greenville	J. G. Bohannon, Greenville	20
NELSON	J. W. Smith, Bardstown	H. D. Rodman, Bardstown	A. G. Blincoe, Bardstown	16
NICHOLAS	G. W. Grimco, Carlisle	Geo. D. Spencer, Carlisle	R. J. K. Tilton, Carlisle	7
OHIO	No organization reported			
OLDHAM	J. R. Speer, Brownshoro	R. B. Pryor, Brownshoro	R. B. Cassady, LaGrange	11
OWEN	S. A. Veal, Squiresville	W. G. Birchett, Owenton	J. W. Botts, Owenton	16
OWSLEY	S. C. Sanders, Booneville	A. M. Glass, Booneville	J. A. Mahaffey, Sturgeon	4
PENDLETON	J. H. Barbour, Falmouth	J. E. Wilson, Falmouth	H. C. Clark, Falmouth	6
PERRY	No organization reported			
PIKE	" " "			
POWELL	C. D. Mansfield, Stanton	I. W. Johnson, Stanton	C. D. Mansfield, Stanton	7
PULASKI	W. M. Price, Dabney	J. M. Owens, Somerset	A. W. Cain, Somerset	18
ROBERTSON	J. B. Wood, Mt. Olivet	M. S. Chandler, Mt. Olivet	Mark Insho, Bratton	3
ROCKCASTLE	J. S. Cooper, Livingston	S. C. Davis, Mt. Vernon	M. Pennington, Mt. Vernon	9
ROWAN	To be reported			

ROSTER OF COUNTY SOCIETIES—Continued.

COUNTY	PRESIDENT	SECRETARY	DELEGATE	NO. OF MEM.
RUSSELL.....	Included with Adair County	J. E. Pack, Georgetown	D. B. Knox, Georgetown	11
SCOTT.....	Wm. H. Coffman, Georgetown	S. L. Beard, Shelbyville	F. M. Beard, Shelbyville	16
SHELBY.....	T. E. Bland, Shelbyville	M. M. Moss, Franklin	J. C. Douglas, Franklin	6
SIMPSON.....	G. W. Duncan, Franklin	Wiley Rodgers, Taylorsville	W. E. Shepherd, Taylorsville	10
SPENCER.....	H. C. Mathis, Taylorsville	J. B. Buchanan, Campbellsville	J. L. Atkinson, Campbellsville	6
TAYLOR.....	J. L. Atkinson, Campbellsville	T. E. Bruce, Elkton	G. M. Gower, Trenton	19
TODD.....	W. D. Jefferson, Elkton			
TRIGG.....	No organization reported			
TRIMBLE.....	C. P. Haywood, Milton	L. G. Contri, Winona	F. W. Hancock, Bedford	8
UNION.....	W. A. Richards, Morganfield	R. H. C. Rhea, Morganfield	T. J. Shoemaker, Morganfield	23
WARREN.....		J. H. Blackburn, Bowling Green	J. N. McCormack, Bowling Green	28
WASHINGTON.....	No organization reported			
WAYNE.....	A. S. Cook, Montecello	W. E. Woodroe, Montecello	C. B. Rankin, Montecello	7
WEBSTER.....	No organization reported			
WHITELY.....	E. S. Moss, Williamsburg	S. Sullivan, Williamsburg	J. H. Parker, Williamsburg	17
WOLFE.....	B. D. Cox, Fincastle	J. H. Stamper, Campton	J. H. Stamper, Campton	3
WOODFORD.....	S. H. Worthington, Versailles	W. C. McCauley, Versailles	B. F. Parrish, Midway	14

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

Some disturbance has been kicked up by letters which have been written to certain members of the Kentucky State Medical Association by the secretary of the American Medical Association calling the attention of the said members to the fact that they were not in good standing with the Kentucky State Association and therefore were ineligible to membership in the American Medical Association. The secretary of the Kentucky State Association has received a number of letters from these gentlemen, some of them of mild inquiry, others strongly protesting, and yet others violently expressive. He desires to make the following explanation: A members' standing in the Kentucky State Medical Association is determined entirely by his county society; if in the annual report of the county secretary a member is reported as delinquent he must of necessity be placed on the non-members' list for that county for that year, and under these circumstances would become at the same time ineligible for membership in the American Medical Association. The State Secretary has absolutely no power or function in the matter other than tabulating the reports of the county secretaries and making a further report to the secretary of the American Medical Association. The constitution and by-laws of the State Association and of the county societies have made these provisions. The gentlemen who have received these notifications should not feel either hurt or indignant, but should look upon it as being simply in the course of business. It is proposed in so far as possible to conduct the affairs of the Kentucky State Medical Association in a business way, and the members of the county societies are expected to assist by paying up their dues to the county secretaries at the

proper time, so that their names can be properly enrolled and passed on from the county to the State secretary and so on to the secretary of the American Medical Association. In those cases where gentlemen who have paid dues have received such notification it has been owing to the fact that such dues were paid so late that they were not included in the county secretary's report, which was due on the first of April, or that the county or State secretary has simply made a mistake in tabulation. To all such the State Secretary begs to say that no offense has been intended, and desires further to express the hope that next year all members will make their remittances to the county secretaries in due time, and so avoid any possibility of similar errors.

Just one further word in regard to this matter: In several letters which have been received the writers have declared that they had not been aware that any charges had been preferred against them, that they had had no notification of such contemplated action, and that, further, they were of opinion that the power did not reside in the State Secretary to suspend members of the Kentucky State Association at will. This is quite true. The State Secretary has no such power and certainly would be very sorry to exercise if it he had. The power to suspend or expel members resides entirely in the county societies and in the Council of the State Association. The State Secretary is merely an executive officer in the service of the Association whose duty it is to receive reports from county societies, to tabulate them and to report results. If members are suspended for non-fulfillment of obligations in the matter of payment of dues, they are responsible for such suspension themselves, because they have, by adopting the present constitution and by-laws, agreed that such suspension should be put into effect.

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KENTUCKY



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OFFICERS OF THE KENTUCKY STATE MEDICAL ASSOCIATION, 1904-5.

President—F. H. Clarke, 24 Market Street, Lexington.
Vice-Presidents—L. L. Robertson, Middlesboro;
A. S. Cook, Monticello; Buckner Littlepage, Clay City.
Secretary—James B. Bullitt, 205 W. Broadway, Louisville.
Treasurer—W. B. McClure, 146 Market St., Lexington.

Orator in Medicine—J. F. McClymonds, Lexington.
Orator in Surgery—Louis Frank, 226 W. Chestnut, Louisville.
Delegates to American Medical Association—
Ap. Morgan Vance, 218 W. Chestnut, Louisville;
J. N. McCormack, Bowling Green; A. D. Price, Harrodsburg.

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First District—Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, Livingston, Lyon, Marshall and McCracken: **Councillor, W. W. Richmond, Clinton.**

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Sixth District—Boyle, Green, Marion, Mercer, Nelson, Taylor and Washington: **Councillor, R. C. McChord, Lebanon.**

Seventh District—Adair, Casey, Clinton, Garrard, Laurel, Lincoln, Pulaski, Rockcastle, Russell, Wayne and Whitley: **Councillor, J. G. Carpenter, Stanford.**

Eighth District—Bourbon, Bracken, Fleming, Grant, Harrison, Jessamine, Kenton, Campbell, Mason, Nicholas, Pendleton, Robertson, Scott and Woodford: **Councillor, J. E. Wells, Cynthiaana.**

Ninth District—Boyd, Carter, Elliott, Floyd, Greenup, Johnson, Lawrence, Lewis, Magoffin, Martin and Pike: **Councillor, J. W. Kincaid, Catlettsburg.**

Tenth District—Bath, Breathitt, Clark, Estill, Fayette, Lee, Madison, Menifee, Montgomery, Morgan, Owsley, Powell, Rowan and Wolfe: **Councillor, I. A. Shirley, Winchester.**

Eleventh District—Bell, Clay, Harlan, Jackson, Knott, Knox, Letcher, Leslie and Perry: **Councillor, J. S. Lock, Barbourville.**

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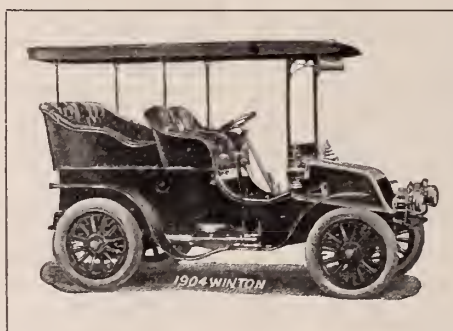
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ORATION IN MEDICINE.

Delivered before the Kentucky State Medical Society at Lexington, Ky., May 18th, 1904, by JOSEPH BENSON MARVIN, M. D. LL. D.

Koch's discovery of the etiology of tuberculosis was epoch-making, and his demonstration of its communicable and preventable character was complete. He again loomed large on the horizon when he announced the discovery of tuberculin. The medical world was on the tip-toe of expectancy. At the earliest possible date I secured a supply of the tuberculin and at a meeting of the Kentucky State Medical Society in this city in 1891, I made a short report of its use in twenty cases of pulmonary tuberculosis and five cases of lupus. The report was received with satisfaction and enthusiastic predictions were indulged in for its future.

Behring's diphtheria antitoxin was put forth shortly afterward, and for the past decade there has been a prolific brood of sera, and false prophets have arisen, crying "Lo here!" and "Lo, there!" is the solution of the problem of the infectious diseases, and have led astray sometimes even the elect. I have had no further experience with any of these sera save only a limited one with the diphtheria antitoxin. Many of the claims are a farce, an abomination to science and a menace to educational progress. I believe I voice the opinion of conservatism when I say that the most that can be justly claimed for them is the Scotch verdict, "Not proven."

The study of micro-organisms, their microscopic structure, reactions to stains and cultural growth has been pushed well-nigh to the limit and has yielded valuable results, revolutionizing much of our pathology. More recently the study of the chemical products has been assiduously pursued, and unfortunately, there has sometimes appeared to be a divorce-ment or antagonism between the biologist, the chemist and the clinician. Much of our literature has been burdened with laboratory jargon, meaning anything or nothing according as the reader is an adherent or opponent of some particular hypothesis.

Test-tube experiments should never outweigh bedside testimony. If I should choose a text, it would be "Back to the Bedside." I believe, therefore I speak. The supreme test of the medical man is to recognize disease in the individual and properly treat it. To heal, to help, is his best motto. We must look not only to the agent applied to the

body, but to the body itself as well, to get clear conception of the causes of disease.

This is solid rock; all other foundation is but sinking sand. Every doctor stands at the headwaters of a stream of influence and opportunity, and blessed is he who does not muddy the fountain. "A man bears beliefs as a tree bears apples." Emerson says: "We aim above the mark to hit the mark; every act has some falsehood of exaggeration in it." I need frequently to caution myself, and fain would include you in the admonition against the danger lurking near every doctor, the danger of making too much of what he sees and describes. The enthusiasm born of limited experience is dangerous and may lead to a thousand blatancies of bigotry, of cock-suredness, and an assumed appearance of superiority without the reality. In this intensely practical, pushing age the doctor can not sit by the wayside, else the world will pass him by as a blind beggar. Yet it is wise sometimes to pause and get our bearings and take stock. We are groaning under a great load of undigested medicines, whose value remains to be determined.

The manufacturing druggist and dealer in proprietary drugs pander to our inordinate gullibility and by the use of the name and garb of easily-coined pseudo-science and without the suspicion of commercialism in its tone, lead many willing captives by the witchery of their eloquence and make some but facile fabricators of fiction and others quasi-endorsers of crass misrepresentations of chemistry and science. If we trust "the true-seeming lie," all that is necessary to compel Nature, however crippled, to resume labor and build up tissue, is to administer any one of a number of pre-digested, peptonized, malted or otherwise fake foods or pretentious tissue-builders, claiming to be competent therapeutic foods without the intervention of digestive effort; or some chemical compound so nearly protoplasmic as to build tissue itself without Nature's co-operation or consent. The dictum of Napoleon that an army moves on its belly is to be altered and instead the army will hardly need a belly to move on. Instead of controlling the quantity and standards of medicines, we have largely become exploiters of such materials as the manufacturers care to put upon the market. Have you ever labeled a patient with the name of a disease and forthwith assiduously medicated and fed the label, losing sight of the patient? Platitudes, trite platitudes, you may say,

and I heartily agree with you, but "let him that is without sin among you cast the first stone." I plead not for less science but for closer union between the laboratory and practice, and that the deductions from the laboratory be applied at the bedside, the only true touchstone.

The trend of medical research is along the line of pathology but the clinician should follow close in its wake. Care and exactness in diagnosis are of prime and fundamental importance. A diagnosis may be etiological clinical, or pathological; in other words, an opinion based on the specific cause of disease in an individual case, or the study of the pathological processes in the living body, or a study of the tissue changes the results of diseases as found in the dead body. We have unduly magnified etiology and pathology, and often therapeutics is forgotten. Owing to the undermining of our symptomatic drug therapeutics by the pathologists, we have largely abandoned empiric drug therapeutics, losing faith in pharmaceutical specifics. I am not a drug nihilist nor an approver of the do-nothing policy. We have all heard the cry, but not the corroborative chorus, that the various serums represent an era of precise specific therapeutics and they are the Mecca of the pharmacology and therapy of the future. We must still use many empiric remedies. The pathologist has so far failed to explain the action of so old and so potent for good an agent as iron. The laboratory has brought many means of precision to the clinician. With exactness in clinical diagnosis, there is promise of a brilliant future for therapeutics, but great care is needed in ascribing to drugs good effects that may be justly due to careful hygiene and to Nature's kindly aid.

It may well stagger credulity when the claim is made that by the use of some favorite intestinal antiseptic—that Golden Calf of the manufacturing pharmacist—typhoid fever may be aborted or its course shortened. If we would carry our pathology with our therapeutics to the bedside, and realize that typhoid fever is more often a general bacteraemia than an intestinal disorder and that in eighty per cent. of the cases the specific bacillus can be found in the blood, we would realize the absurdity of the claim that any of the so-called intestinal antiseptics can exert any appreciable influence over the twenty or more feet of intestine and the entire blood stream. Because glycerine is hygroscopic, it is but the counterfeit of science to claim that

a paste of glycerine and fine clay applied hot to the chest will have any effect on a pneumonia, no matter how learnedly the manufacturing chemist may talk about osmosis. The injection of some fluid of unknown composition in tuberculosis smacks of quackery. A tyro in chemistry would laugh to scorn the claims about nascent chlorine and ozone. Water—the cheapest and commonest thing in nature—is bottled, and we pay the price of wine for it and imagine it cures Bright's disease and diabetes. These are but examples of therapeutic optimism which needs to be shunned equally with therapeutic nihilism. The lowest function of the doctor is to peddle pills, powders and potions. While it may be impracticable to prove all things, let us not be swept off our feet by every wind of therapeutic doctrine but hold fast to the good.

Serum therapy is such a complicated affair that few have time or patience to master it. There can be no objection to Ehrlich's side-chain theory as a working hypothesis, though it has received severe criticism on account of its complexity and the absurdity of some of its conceptions. In time it will give way to something more fundamental. It deals with chemical substances and chemical and physiological processes, and will ultimately be interpreted in terms of chemistry and physics. The recent work of Kyes, Arrhenius and Madsen bid fair to revolutionize the subject and place serum immunity on a chemical and physical basis. When the chemistry of immunity has been brought into the realm of analysis, a vast stride in the direct synthesis of immunizing substances will have been taken. Whether we believe in the therapeutic efficacy of the various sera or cling to empiric drug treatment, let not our esteem for one unduly depreciate the other. 'Tis a wise saying of old John Harvey: "True philosophers, compelled by a love of truth and wisdom, never fancy themselves so wise or full of science as not to yield to truth from any source and at all times; nor are they so narrow-minded as to believe that any art or science has been handed down in such a state of perfection to us by our predecessors that nothing remains for future industry." If we build castles in the air, let us first build our foundations.

The study of protozoa is attracting much attention and valuable work is being done along these lines in this country, notably by Gaylord on cancer; Councilman and his colleagues on small pox and vaccinia; Mallory

on scarlet fever; Novy and McNeal on trypanosoma; Wilson and Chowning on Montana spotted fever. It is generally accepted that malaria is caused by the protozoa of Laveran entering the red blood corpuscles, and it seems probable that smallpox and yellow fever are caused by protozoa. Novy and McNeal have cultivated trypanosoma. Prof. Calkins, Professor of Zoology in Columbia University, has been called to the aid of our American pathologists in the study of this lowly group of animals, and in a recent report he is quite positive that we can claim their etiologial relation to some of the diseases named above. The study of protozoa is hedged about with many difficulties. They do not grow on ordinary culture media and can not satisfy the requirements laid down by Koch in bacteriology. Our studies must be limited to the morphological changes of the tissues and blood of the infected animal, or during the life cycle in the the body of the intermediary host. We may justly be in a state of hopeful expectancy. While the pathologist may see only cellular disintegration or artefacts, with the aid of the zoologist we may yet unravel the mystery of the commonest of the contagious and eruptive diseases. A new outlook in therapeutics grows out of this study. Quinine was used empirically in the treatment of malarial fevers before we knew anything of the protozoa. Recently Ehrlich and Shiga have been experimenting on the trypanosoma with chemical substances of the benzo-purpurine series and have succeeded in producing a compound which possesses specific action upon these protozoa, and it would seem that certain pharmaceutic agents acting directly or indirectly in destroying certain parasites in the body may set up a reaction that will eventually lead to immunity. We have another instance of empiricism and clinical experience outrunning pathology but finally the action explained and harmony between theory and practice.

Valee's law that "If an animal A is inoculated repeatedly with the albuminoid material derived from an animal of a different species, B, the serum of the animal A acquires the property of precipitating *in vitro* albuminoid solutions derived from the species B; the further species are removed from each other on the scale of biological evolution, the more specific the reaction and *vice versa*" has opened up a new field. The study of the chemistry of the blood has revealed certain blood relationships among animals which may be

demonstrated by the precipitation test for blood. These studies on blood immunity have yielded to the medical man more exact information and of a kind which the physicist, the chemist and the biologist have been unable to afford. These studies have demonstrated differences in the albumins hitherto unsuspected and incapable of being detected by the best methods at our disposal, and the new biological test for human blood would seem to be delicate and accurate and of the utmost value in medico-legal cases.

The detection of a copper-reducing substance in the urine does not necessarily mean diabetes; repeated and confirmative tests should be made. Much error has been committed in making casual examinations. Even if glycosuria should exist, unless we treat the patient instead of the reducing substance in the urine, many mistakes may be made in the dietetic and medicinal management of the condition. The final stage in the conversion of glucose in the animal economy is not known. The chemical analysis and the routine diet list may prove but the form of science and not the substance. We must recognize degrees in severity in diabetes and the careful clinician must have had forced upon him that he need not restrict his patient too rigidly to the non-starchy foods. Most cases of glycosuria will bear certain amounts of carbo-hydrates and many are made worse by a total withdrawal of this class of foods. The removal of the glycosuria is not the only object, for excretion of sugar is merely a symptom in diabetes. It may be the chief index of the progress of the disease and the loss of sugar constitutes the chief danger. What does it profit by restricting to a non-carbo-hydrate diet to diminish or even eliminate entirely from the urine glucose, if we starve the patient to death; or by increase of proteid food produce a condition of acidosis, thereby greatly increasing the danger of diabetic coma?

The routine administration of opium and its derivatives in this disease, though sanctioned by some, is an error that may lead to serious consequences. I believe the supposed benefit—namely, the diminution in quantity of urine eliminated—is more than counterbalanced by the evil results. Let us study the individual and by adjustment of the three forms of diet keep his nutrition in the very best possible condition, and not fix our attention solely on the presence of glucose in the urine.

Something more is necessary in the diag-

nosis of nephritis than the presence of albumen or even tube-casts in the urine. Hardly any other disease will so tax the skill of the physician as chronic nephritis. The degree of albuminuria and even the character of the casts require extreme caution in their interpretation. I think serious mistakes have been made in the dietetic management of chronic Bright's disease. The traditional idea that albuminous foods must be withheld and excessive amount of water given is founded on a delusion. The danger in nephritis may be as great at the heart as at the kidney and the so-called uremia is not dependent upon the retention in the blood of urea and allied products, but depends more upon the condition of tension or balance in the circulation. Peripheral resistance overmasters the heart, causing congestion of the cerebral capillaries. It is unwise to cause a schism in the body; it is wiser to consider the patient's general condition than to fix attention solely on the condition of the urine. In chronic Bright's disease, more urine and more albumen are passed upon a farinaceous or milk diet than a full diet. The amount of urea passed is uncertainly affected by diet. In the interstitial form, where an excessive amount of urine is passed, certainly it is unwise to encourage the drinking of large quantities of milk or mineral or other water. Full diet is generally no more liable to lead to uremia than restricted diet and the patient's general condition is much better and stronger on it, as they frequently loathe the exclusive milk and farinaceous diet. The amount of albumen in the urine may be an indication of the extent of the disease; otherwise it is not of much importance. If albumen is being lost in large quantities, certainly it is logical to give albuminous food. Watch the general condition of the patient, especially the condition of the heart and arterial tension. Do not starve thereby causing physiological bankruptcy, but give more liberal mixed diet. The prognosis is far better than is generally taught. In Bright's disease, a certain relation seems to exist between the amount of salt ingested and that excreted, and the amount of edema. Retention of the chlorides seems to increase the amount of edema; recently we have had the cure by dechlorinization, reducing the amount of albuminuria as well as the edema.

The world over is agreed as to the contagiousness of scarlet fever scales. The capriciousness of the contagion of scarlet fever has been observed by many physicians and

some have had cause for complaint that isolation until complete desquamation did not prevent infection of others. In a recent article, Dr. Lauder of the Fever Hospital, Southampton, England, who has had a vast range of experience, expresses the opinion that the contagion of scarlet fever is conveyed by the respiratory tract and that the constitutional condition and rash are the results of toxic products and are not dangerous as regards the spread of the disease. In 1892 the hospital records showed return cases of 4.27 after a stay in the hospital of 48 days. In 1893 methods were instituted to thoroughly treat the nose and throat and less attention was paid to the stage of desquamation. The percentage of return cases was 2.15, with a stay in the hospital of 34 days. This is a striking instance of the value of bedside experience.

Malaria is recognized as a contagious disease, caused by the plasmodium of Laveran. So far the only demonstrable way in which the infection may be produced is by inoculation by the sting of the female mosquito of the anopheles variety. While mosquitoes carry the infection, it is unwise to push aside a great many clinical facts bearing on the meteorological and telluric conditions. The diagnosis is generally easy and the detection of the organism in the blood is conclusive, though there are unmistakable cases in which the organism escapes detection. We have been slow to realize that periodicity or a paroxysm composed of chill, fever and sweat, necessarily imply malaria, and too often the term malaria is used as a cloak for our ignorance or laziness. Malarial fever in this latitude has no license to resist quinine properly administered. Allow me to stress the fact of the existence of hepatic, renal and cardiac conditions giving fever of an intermittent or remittent type, with no connection whatever with malaria. The paroxysm of chill, fever and sweat are as characteristic of sepsis as of malaria. In this latitude recurring chills with continued fever are more frequent in typhoid fever than in malarial fever. Countless thousands of tuberculosis cases, lulled into false security with the diagnosis of malaria, have sinned away their day of relief and have gone where "the Silence sleeps."

The three ubiquitous diseases—tuberculosis, pneumonia and typhoid fever—force themselves upon the attention of every practitioner. It can not be said that the last word has been said about either of these diseases and we need careful bedside study with the ap-

plication to the individual patient of all the teachings of modern science.

"Familiarity breeds contempt" is alike true in morals and medicine. Phthisis is so common that we often look upon it with indifference and easy tolerance of its frightful ravages. This great "white plague," regardless of station or circumstance, age, sex or previous condition of servitude, invades alike the homes of the rich and the abodes of the poor. "The pestilence that walketh in darkness, the destruction that wasteth at noonday," the ravages of war, all pale into insignificance when placed by the side of consumption. In nearly every household there is heard "weeping and lamentation, the voice of Rachel weeping for her children and refusing to be comforted because they are not."

Tuberculosis is not a passing epidemic but the most devastating scourge known to man. I shall not weary you by calling the roll of the well nigh endless list of drugs and medicaments administered in powder, liquid, solution, vapor; by mouth, per annum, inhaled or sprayed, internally or externally; hot air and other inhalations; gaseous enemata and foods equally as absurd if not as foul-smelling, the blood of bullocks quaffed and the blood of malodorous goats hypodermatically injected; for all have proved their success as uniform failures.

We have been slow to appreciate the communicable and preventible character of this disease and the necessity for intelligent sanitary surveillance. No essential facts have been added to the observations of Koch on the etiology of the disease. Its preventibility and curability are not matters of recent discovery. Even yet, in comparatively only a few places, have measures been put into effect for the proper control of the disease. There has been a wave of agitation and popular education on the subject, but no comprehensive or effective measures have been generally taken for dealing with the disease. The profession as well as the laity have consented to the administrative control of other communicable diseases, such as smallpox, scarlet fever, diphtheria, etc., but it has seemed to be impracticable to secure the enactment of suitable legislation on the subject of tuberculosis. Measures looking to its proper sanitary supervision have been instituted in New York and statistics show that the death rate per thousand has been reduced in the past twenty years from 4.45 to 2.68 and the total mortality from 25.82 to 19.10. Tuberculosis is es-

entially a house disease and we recognize now the essential unity between human and bovine tuberculosis and the intercommunicability between man and cattle. There is great variation in virulence. We do not inherit the disease but simply a suitable soil. Tuberculosis may be latent and it is a striking fact that the mortality under fifteen years of age is very slight. After that period the mortality surpasses that from all other diseases. One in every four or five adults die of it. Children are certainly as much exposed as adults to the infection. Yet there must be a period of latency during the early years of life, to be kindled into activity by the onset of some acute exciting cause. Infection may occur by inhalation, ingestion or inoculation. The Exposition in Baltimore was one of the most important movements yet taken to enlighten the public in regard to the nature and prevention of tuberculosis. Such an Exposition held in each of the States would prove of far reaching importance and value to the medical profession as well as to the laity.

Following the tuberculin fiasco came the era of serum treatment, now most generally abandoned; then came the climatic treatment; then a reaction following this, the sanitarium treatment; and now the home treatment. Tuberculosis is the most preventible of all the infectious diseases. As far as we know there is no drug which has the slightest specific action on the disease. Early cases are comparatively easy to cure; advanced cases are impossible to cure. The watchword should be "the earliest possible diagnosis." Let me emphasize the importance of careful physical examination, especially posteriorly over the lungs. With a history of a rapid pulse, slight elevation of temperature, loss of weight and digestive disturbances, we can frequently make a diagnosis even before the tubercle bacillus can be detected in the sputum. Difficult refinements of physical diagnosis are useless so far as any good to the patient is concerned. It is impossible to detect small areas of dullness and when a cavity is detected, the disease has made great headway and soon the bed becomes the mercy-seat.

We recognize the supreme importance of air, sunshine and diet. The so-called home treatment may be a delusion and a snare. Sanitarium treatment, if properly conducted, holds out the hope of the future. But let us not build extensive or expensive hospitals but more huts, cabins and tents where the patient

can live in the full eye of "the healing wind of God."

The laboratory conception of tuberculosis has prevailed. In a recent article Von Behring, supported by the statistics of Naegeli that numerous autopsies prove that practically all dying beyond thirty years of age give evidence of having been at some time the hosts of the tubercle bacillus, takes strong ground in favor of the view that the tubercle bacillus enters everybody's system early in life through food, and that it depends upon the subsequent reaction of this individual's system whether or not tuberculosis is set up after thirty or forty years. This view would relegate the bacillus to pathology and make it play an insignificant role in etiology, and our present methods of dealing with the bacillus before it enters the human system will prove but an iridescent dream.

Croupous pneumonia, in the cities especially, easily ranks as the most frequent and fatal of the acute diseases, and in the words of quaint old John Bunyon, "It is the Captain of the Bands of Death." The medical and lay press have been groaning under the load of articles on this subject and every medical society perhaps in the land has discussed it. I am persuaded that the disease is infectious and should be managed with the same care as other diseases of this class. While its contagion may be slight, and while it is claimed that the specific organism is present in the mouths of twenty per cent. of healthy people, scrupulous cleanliness of mouth and throat of every patient with the disease and the destruction of the nasal and buccal secretions, with isolation of other members of the family and better hygienic management, is the proper method to pursue. The over crowding in small, poorly ventilated houses with deficient air space and absence of sunlight too often causes a man's castle to become his chamber of death.

In the treatment of the disease the tendency is to over-treatment and meddlingness. In a disease that is self-limited and running generally a short course, the skill of the physician is taxed, and while prompt and energetic treatment may be necessary to save life, useless drugging and agencies applied internally and externally, over-feeding and over-stimulation and over-handling or over-nursing are fraught with great danger. Fresh air, digestible food in small amounts, sleep—tired Nature's sweet restorer—and the treatment of symptoms as they arise are the beacon

lights in the management of this disease. The routine administration of alcohol, of strychnine or other so-called heart stimulants is fraught with great danger. Applications to the chest may be a nuisance and a source of discomfort; only by relieving pain, thereby contributing to the comfort of the patient, have they any virtue. Antipyretics are never called for; the temperature is never high enough or long enough in duration to put the patient in peril. The truth is, a patient with a low temperature, clammy skin and lividity, with feeble pulse, is in most danger. Cough mixtures have a very minor place in treatment. So-called expectorants of all kinds are contraindicated. Feeble patients need rest by day and sleep by night, and it is rarely wise to wake a patient for food or medicine. Many of the symptoms—pain, fever, cough, etc.—are conservative in their origin and should only be checked when excessive. Opium so generally given to check cough and alleviate pain, is potent for evil rather than good. Cough and expectoration should not be checked. The safety of the patient depends on the respiratory centers being kept "wide awake." Opium depresses and finally paralyzes the respiratory centers and checks all secretions except that of the skin. Pain, cough and restlessness are preferable to the somnolence which paralyzes the respiratory centers and checks elimination. At the approach of the crisis, opium is more to be dreaded than any other drug.

Little or no aid in the diagnosis or treatment has followed the discovery of the pneumococcus. At the present stage of progress no hope is held out of a protective antitoxin; there is absolutely no specific. The prevailing use of cold-tar products as headache remedies has weakened the hearts and lowered the resisting power of many patients, killing many that would otherwise have escaped pneumonia. The individual patient presents the problem in the therapeutics, and we go wide of the mark when we look upon the patient as a mere integer in a column of statistics. Not the figures on the nurse's chart but a close study of the totality of symptoms in the individual, is the only rule to follow.

Our conceptions of typhoid fever have undergone frequent changes. The old idea of a fixed pathological picture with intestinal ulceration as the leading feature has been revised and we now know that this ever-changing and protean disease is a general infection, a bacteriemia. The absorption of

typhoid toxins from the intestinal tract is of far less importance than the widespread production of toxins in the blood, spleen, etc., and emphasizes the folly of the so-called specific or intestinal antiseptic treatment. There are closely allied infections due to the paratyphoid or para-colon bacilli which are attracting attention at present but we have no positive means of differentiation. Typhoid does not terminate by crisis and has no definite duration. Many cases last beyond the traditional 21 to 28 days. In a certain number of cases fever persists for several weeks despite the nonexistence of complications; these are the cases that vex the soul of the physician. Constipation, too exclusive milk diet or starvation may account for some of these cases.

There has been a widespread prevalence in this country of typhoid fever since the Spanish War and while science tells us that a patient sick with typhoid fever is a focus of infection and that we have ready at hand means for destroying the poison as eliminated from the patient, yet the carelessness of the doctor or nurse in not instituting well-known means which should be enforced in every case of typhoid fever, may through ignorance or carelessness on the part of the attendants, cause a widespread infection. As long as we continue to run our sewer into our streams of water, polluting our source of drinking supply, and do not compel better sanitary arrangements along our great lines of railway, it seems almost a hopeless task to stamp out the disease. It is a trite axiom in sanitation that the prevalence of typhoid fever is an index of the sanitary culture of the community. A striking commentary has been afforded by Vaughan in a recent paper, showing that there are fifty thousand deaths from typhoid fever and five hundred thousand people sick with it in the United States each year, and that we pay ninety million of dollars for our stupidity and ignorance, for the existence of a disease which, if every man did his duty, would not exist at all.

Medicine is the mother of most of the sciences and she continually receives help from all her children. Chemistry, Physics, Biology, Mathematics and Engineering all converge to Medicine to complete the clinical whole. She has kept step with the march of civilization. No other vocation brings man so close to the homes and lives of the people. It has been

said that the clergyman sees people at their best, the lawyer sees them at their worst, but the doctor sees people as they are. He is the most misunderstood of men. Medicine is an art, a profession, and cannot be judged by the standards of trade or business. If nature be but evolution, mere cause and effect, she neither kills nor cures; she can be guided or misguided by the physician. In matters of life and health, the doctor utilizes or combats the forces of nature. By caring he cures. His best energies are always directed towards inhibiting the various conditions from which he gains his livelihood. He has no patents or trade secrets, no proprietorship in anything his colleague may not use for the benefit of humanity. He strives to prevent disease, to perfect measures to alleviate suffering and through his Societies, the medical press and libraries open to the public, he teaches the layman how best to dispense with the services of the physician. The doctor should be a public servant as well as the servant of the individual. He is the apostle of health and healthfulness. He is the conservator of the peace and happiness of society, the trustee of the health of the community. The public cannot grasp the idea that philanthropy has any place in business. The physician is uplifted by his efforts to lift others and if his character has caught the contagion of sympathy and he is conscious of possessing power to help, he does not wait to be asked but "shall be like a dew from the Lord that tarrieth not for man", but falls alike on the suffering rich and poor.

A doctor should have the long look. Lack of perspective means short-sightedness and this is pessimism, which has no future and is without hope. Be it said to his honor that, while never Utopian, the doctor is always expectant, hopeful and persevering, never pessimistic. Let the young men dream dreams and the old men see visions, realizing that the dream of today is the science of the next generation; and if we must fail, let us fall with our faces to the light. Be our motto, "To give light, to save life," until the day comes when, in the words of the Great Physician, "The blind receive their sight, the lame walk, the lepers are cleansed and the deaf hear;" and until the words of the prophet shall be fulfilled "And the inhabitant shall not say, I am sick."

ETHER ANAESTHESIA. *

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This subject was selected because I felt the need in this section of the country that more should be said and written and put into practice about ether anaesthesia. The best of every thing is either discovered or developed in America, this is true of ether, the anaesthetic properties of which were made use of for the first time by Dr. Crawford W. Long, of Jefferson, Ga., in 1842; but it remained for Dr. T. G. Morton of Boston, in 1846, to thoroughly demonstrate its anaesthetic qualities and induce surgeons to use it. And today Ether stands preeminently as the world's anaesthetic. Chloroform, which was discovered one year later by Sir James Y. Simpson, however deserves special mention right here, for it holds quite an important place in anaesthetics, but ether is held far above chloroform on the pinnacle of safety. Absolute safety in the use of anaesthetics, however, does not exist, so profound a perturbation of the processes of life as the total abolition of all sensation can not be brought about without some risk of life. It is our duty, therefore, to employ that anaesthetic that experience, not necessarily our own experience, but that of thousands of others, has demonstrated conclusively, is the safest anaesthetic for surgical purposes.

Ether has a strong and not very agreeable odor and a hot burning taste and its inhalation causes a sensation of choking; this, however, can be minimized by its gradual administration and dilution with atmospheric air until the patient gets a little accustomed to it. Ether is a very diffusible cardiac and respiratory stimulant when given in proper quantity, in producing anaesthesia, but paralyzes the respiratory center and depresses the heart when given to excess.

Ether first affects the brain, then the sensory part of the spinal cord, then the motor tract of the cord, then the sensory tract of the medulla oblongata, and finally the motor portion of the medulla, thereby producing death by paralysis of the respiratory center.

In the administration of ether as in the case with chloroform, it is important that a careful preparation of the patient be made, all food should be withheld for twelve hours previous to its administration. Since ether produces considerable nausea and vomiting, the necessity of this precaution should be impressed upon the patient. Under ordinary circum-

stances the food taken into the stomach passes out long before the expiration of twelve hours, but the mental anxiety and excitement of an impending operation frequently arrests digestion. The patient should have all tight clothing removed and best have on only a gown, the two upper buttons of which should be unfastened so as not to constrict throat or chest, also in case it becomes necessary to use the hyperdermic needle it can be done without the delay occasioned by unfastening the clothing.

Knowledge should be had of the condition of the kidneys, lungs and respiratory tract, heart and volume of both radial and temporal arteries and capillary circulation. Everything not fastened should be removed from the mouth. Having a hypodermic syringe prepared containing heart and respiratory stimulants, my preference being strychnia, nitro glycerine and atropine; a mouth gag, tongue forceps and small sponges and sponge holder for removing excess of mucus from throat, which is one of the disagreeable effects of ether.

The consideration of an ether cone, the exact construction of which plays a very important part in the administration of ether, is a matter that deserves careful consideration.

The author of this paper in the administration of anaesthetics, more than three thousand times, and without a single fatality, has studied and tried various cones for the administration of both chloroform and ether, I concluded some ten years ago, that the Esmarch Cone for the administration of chloroform was the best. But in the matter of ether cones I tried a number of patterns, including, Allis', Clover, Townsend and various others but discarded each of them as not being without material fault. Some four years ago it dawned upon me that if ether could be administered upon the Esmarch or Schimmelbusch wire mask covered with several layers of gauze, it would be the safest method for its administration.

I made several efforts with some success, but after three or four anaesthesias I encountered a case that I was unable in which to produce profound surgical anaesthesia and changed off to chloroform and proceeded without difficulty or incident. This discouraged me in the use of the open cone for about two years. Upon being informed by a friend that the cone that I had endeavored to use without much success was being used exclusively in the administration of ether by Drs. J. B. Murphy, Ochsner and the Mayo Bros. and others, I

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again attempted its use with a determination to succeed therein if possible. That was more than two years ago and I have made use of no other cone since in the administration of either chloroform or ether, and I have used it some five hundred times in administering ether.

It will scarcely be disputed that the greater the amount of oxygen or atmospheric air mixed with the ether to produce and maintain surgical anaesthesia the safer will the patient be, this I believe to be the case with this cone, it is composed entirely of metal and can be boiled with the instruments each time before being used. It is very simple in construction, easily carried and cheap, and is certainly the best ether cone I ever used. I employ eight thicknesses of large mesh sterile gauze over the frame and provide myself with an additional piece the size of the cone consisting of eight additional ply of same kind of gauze, to be used sometimes, in *inducing* ether anaesthesia, but after patient is surgically anaesthetized the gauze last mentioned should be removed and the anaesthesia can usually be continued indefinitely with the eight thicknesses of gauze first mentioned.

Before beginning an anaesthetic it is best to be provided with both chloroform and ether so that if for any reason the patient does not take one well the other anaesthetic is at hand. It will seldom be necessary to change from ether to chloroform, but once in a while, ether will produce so much irritation of the throat and fauces, so much coughing, or such profuse secretion of mucus that it may be necessary to change to chloroform. In administering ether the patient should be instructed to breathe *full* and *regular*, it is a very good plan to have them hold one hand up and see how much they can count, the idea being for them to concentrate their thoughts upon something other than the anaesthetic and will tend to remove the fear of same and cause them to breathe better.

The ether should be continuously applied on cone in small stream distributed equally over cone, which is easily done by cutting two longitudinal grooves on opposite sides of the cork stopper of the ether can, and in one placing a little cotton to direct the ether. The cone should be held well above patient's face at first, some five inches and gradually brought down to face, endeavoring not to produce much choking sensation to patient; when patient will permit of cone being placed on face the additional gauze may be placed over cone and ether pushed to surgical anaesthesia,

which is determined by stertorous character of breathing, relaxation of muscles and absence of corneal reflex. After patient is anaesthetized I always have nurse to tie patient's hands by passing a roller bandage back of neck and placing same about wrists of patients and tie in a bow knot; this bandage is not more than three feet long, this keeps patient's arms from dropping over the side of table; in case of resistance from being in field of operation, and also places both radial pulse at your command; relaxation of hands and fingers and color of nails can be easily observed. In case it becomes necessary to perform artificial respiration, pull ends of bow knots, grasp the hands and proceed according to Sylvester's method, without delay. Since the principal objections to ether are certain unpleasant conditions and sensations it causes at the beginning of anaesthesia, viz: being quite disagreeable to patient, time consumed in producing anaesthesia, profuse flow of mucus, irritation of throat and fauces, causing patient to cough and prolonged stage of excitement; it is my custom in the majority of cases to administer chloroform until the patient is *unconscious* and then change in favor of ether. I do not continue the chloroform to complete anaesthesia, and in administering the chloroform, which is done on the same cone unchanged, I instruct patient to breathe perfectly natural as though going to sleep in the usual way, hold cone some five inches from face and place chloroform on cone drop by drop continuously according to the Esmarch method which can easily be done by fixing cork stopper of bottle the same as the ether can except the grooves are not so deep, since a drop is wanted instead of a small stream. By administering the chloroform in this manner to the degree mentioned above, I believe the patient has been subjected to practically none of the dangers of chloroform and has avoided most of the disagreeable sensations of ether. I have employed nitrous oxide gas to induce anaesthesia preliminary to continuing with ether which is very good, having the advantage of being very quick in producing anaesthesia. There are several objections to its use however. First, the apparatus necessary for its administration is cumbersome to transport and expensive and nitrous oxide gas is not devoid of danger entirely, and is in my opinion, not practical where anaesthetizer has to transport apparatus from place to place. Hence I have discarded its use and employ the method as outlined above.

During ether anaesthesia or any anaesthesia for that matter, it is very important to see that no mechanical obstruction interfere with free ingress and egress of air into lungs; it is frequently necessary to place thumb of fingers back of angle of jaw and pull downward and forward thus bringing jaw and tongue forward which will usually permit easy breathing, unless there is an accumulation of mucus in throat, in which case it must be mopped out with sponge on holder.

While ether kills by respiratory failure and consequently the respiration should receive very close scrutiny, the pulse must not be neglected, for certain changes sometimes occur in the circulation that could not be detected if the respiration alone was being observed. With a little experience one can with the left hand keep one finger or thumb on temporal artery, with the other fingers push jaw forward and hold cone on face; the other hand being engaged in the almost continuous application of ether slowly on cone. In an over dose of ether the diaphragm is first paralyzed, which throws the respiratory efforts upon the muscles of thorax, this is a change that is easily recognized by the observing eye and when these muscles are paralyzed those of throat endeavor to perform the bellows like movement, with very poor success, however; and with the paralysis of these muscles, efforts at respiration cease altogether, although the pulse usually continues to beat for a while. The change in color is usually recognized pretty soon after respiration begins to be embarrassed and volume of pulse falls very much so that the over dose may be recognized first by failing respiration and next by failing pulse, or by sudden dilation of pupil. The first thing to do when there are evidences that the dose is lethal is to withdraw the ether, then draw jaw downward and forward and with pair of forceps grasp tongue and draw forward. If this does not correct the condition, give hypodermic injection which we have spoken of earlier in the article and perform artificial respiration while an assistant is instructed to make rhythmical traction according to Laborde's method, on tongue some fifteen times per minute and if convenient place patient in Trendelenberg's position.

If the symptoms of trouble are recognized sufficiently early, and this is one of the advantageous features of ether, its dangerous symptoms coming on gradual enough to enable the careful observer to recognize and combat them in time to avert serious consequences.

The dose of ether is so variable in different individuals that even an approximate average dose can scarcely be stated. The dose is regulated by its effect, in most cases, however, it requires about 250 grams for an operation of forty-five minutes duration.

With the open cone that I have recommended a good quantity of the ether is blown away with each expiration, so that while this amount of ether seems large the patient does not actually get this amount.

Some authors state that one of the greatest dangers from ether anaesthesia is pneumonia. This, I believe, can almost be eliminated by observing certain precautions; first, sterilize the ether *cone* and *gauze*, as I have previously stated in the paper, and next keep operating room warm and patient protected as much as possible with blankets. There is no doubt but that ether lowers the bodily temperature materially, but by observing the above precautions I have never had a pneumonia to follow ether anaesthesia. Another one of the oft mentioned and much feared sequelae of ether anaesthesia is anuria or nephritis. Modern investigators along this line, whom I might mention Dr. Robert F. Weir, who in an article published in the N. Y. Medical Journal Nov. 16, 1895, gives the following conclusions of his extensive and careful researches: "That etherization in the vast majority of cases in normal kidneys and even in abnormal kidneys, brings about no detrimental effects; that when any evidences of abnormality present themselves they are transitory in character and not productive of harm; that elevation of temperature, which I had before thought would aggravate the work of the kidney and bring about, in conjunction with an ether narcosis, abnormal excretions does not appear to exercise any positive influence on this point."

Dr. Hobart Amory Hare says: "It has been proved both experimentally and clinically that ether is not capable, in the ordinary patient, of producing renal disorder of any moment unless the kidneys are already diseased." There are other authorities holding the same views but I shall not take up your time in quoting more.

The contraindications to ether as an anaesthetic are, diseased lungs and kidneys including diabetes, and operations about face on account of mechanical interference of anaesthetizer with surgeon. The reasons ether should be chosen as an anaesthetic, except in the above mentioned classes and for children and labor cases are: First, it is five times safer

ian chloroform, what more need be said. Dangerous symptoms arising from ether come on slow as compared with chloroform, hence our opportunities for correcting the untoward effects of an overdose are much greater and more effectual than with chloroform. But since dangerous symptoms may arise with any anaesthetic be the anaesthetizer ever so skilled, it is certainly our duty to give our undivided attention, absolutely to the administration of the anaesthetic, when it is intrusted to our hands, for certainly no part of a surgical operation calls for more skill, keener observation, greater judgment and more coolness than the administration of the anaesthetic.

I believe there should be anaesthesia specialists just as there are specialists in other lines; this is getting to be the case in the east now and it should be every where, a man need not limit his work to anaesthesia, but some should make a special study of the work and when one's special fitness and knowledge of this branch of surgery is demonstrated there will be no lacking of recognition of this fact and your services will be in demand. Being a strong advocate of ether anaesthesia in preference to chloroform anaesthesia I am frequently asked "Why is it that the latter is made use of so much more frequently by most anaesthetizers in the south and west, especially?" The principal reason for this, in my opinion is—habit. We see chloroform given largely in our colleges while we are students therein and sufficient stress is not laid on the comparative merits of the two drugs, consequently when the recent graduate is called on to administer an anaesthetic he uses the drug he has been accustomed to see used. Also, since ether is more difficult to administer, he fails to persist in its use long enough to become as proficient in its administration as he is with chloroform, hence the numerous exclusive chloroform adherents.

I have purposely refrained from quoting statistics to bear me out in my statement early in the article that ether is five times safer than chloroform. There is such a wide variation in statistics gathered by different writers that the exact difference in safety would be hard to arrive at. After a careful study of the subject, however, five to one in favor of ether I believe to be conservative.

* * *

DISCUSSION.

Dr. L. P. Spears: I am glad this subject has been brought up for I do not believe it is

held in proper respect by the profession. It is considered by many insignificant, or of secondary importance but I contend at all times that the administration of the anaesthetic is a strenuous matter, and often the responsibility of the anaesthetist is as great, if not greater, than that of the surgeon.

I cannot agree with Dr. Ireland as to the choice of anaesthetic to be used. I have given anaesthetics a great many times and have used chloroform in ninety-five per cent. of the cases. I believe it is *the* anaesthetic to be used, especially where any disease of the respiratory tract exists, and in brain surgery, and not contraindicated in valvular disease of the heart with good compensation. Dr. Hare states that chloroform is more irritating to the kidneys than ether taken quantity for quantity, but anybody knows that the quantity of chloroform given is not to be compared with that of ether, so chloroform is the preferable anaesthetic where nephritis is feared, or exists.

A great deal depends upon the way the surgeon works. Some work smoothly and continually while others are more or less intermittent in their work, and the anaesthetic must be stopped, thereby allowing the patient to come out with natural sequence, viz. vomiting shock, etc. If the surgeon could outline his work beforehand and work smoothly, it would greatly aid the anaesthetist and prevent much of the vomiting and shock to the patient. Many anaesthetists make the mistake of asking the patient to breathe deeply at the start, for they begin to hold their breath about the second stage.

I do not believe it takes more skill to give ether than for chloroform. I agree that the slow method is the only way to administer any anaesthetic. Anaesthetists are usually not watching the patient at all. They become absorbed in the operation, and in this way many accidents occur.

Dr. August Schachner: There are good points in favor of both anaesthetics and neither can be absolutely excluded, but it is surprising to see chloroform given in preference when ether is so much safer. It is true that chloroform is much safer in warm climates than in cold. Dr. Wood has used the expression "the holding on" of chloroform; it is much more difficult to get a patient out of the chloroform crisis than the ether crisis. The boiling point of chloroform is higher than that of ether and its vapor heavier and therefore more difficult to get out of the lungs. Chloro-

form is shown to be a very safe drug in India.

As to the subsequent dangers of ether, I agree with the last speaker that they have not only been reduced but are often due to faulty administration. It has been much more difficult to find a competent administrator of ether than of chloroform. There are many men who do not have the proper paraphernalia and work with tools with which they are not familiar.

When we have a crisis with either drug, the most important single measure is to first clear the air-passages and then use artificial respiration. Of course we should have a hypodermic prepared. Where the number of assistants is limited, valuable time is often lost by giving a hypodermic where there is no circulation at all. Results must be gotten in a minute or so and preference should be given to artificial respiration, with the mouth clear of mucus and mouth and jaw in proper condition.

Dr. Wood has mentioned that the circulatory and respiratory systems are the same in dogs as in man, and therefore we are justified in arguing from one to the other as to character of influence if not degree. The dog is more sensitive to chloroform. After they get under it, they are far more sensitive. You can kill a dog much quicker with chloroform than with ether.

Dr. R. A. Bate: The paper is a classic on the subject. I believe one reason that chloroform is more used than ether in the south, is the same as that at Hyderabad, India, where they could not make the test with ether on account of degeneration from heat. I believe southern observers have gotten better results from chloroform. Both sides have been honest.

It is generally regarded as dangerous to transfer from ether to chloroform. I cannot agree with the gentleman discussing about giving chloroform where there are any heart lesions at all.

I have never used the instrument shown but I have used the ordinary chloroform inhaler with gauze, with satisfactory results. Post-anaesthetic nausea is supposed to be due to the breathing in of the respired air. I think his apparatus is excellent in that the respired air is reduced to a minimum.

I think nitrous oxide may be used where a child is likely to be frightened. I believe there has been a misstatement as to the exact mortality from ether. If the cases that die

after coming off the table were added, the total would be larger. Personally I like to precede ether with an injection of atropine. The pupils are the best guide in my experience.

As to specialism, the anaesthetist should be familiar with the anaesthetic he administers and should use the one he is most familiar with. He should not be interested in the operation. Every movement of the anaesthetized subject requires his observation.

Dr. J. B. Bullitt: It has always been advised that young men try their remedies on dogs first and I believe this would be a good practice for all who give anaesthetics. If the experiment is made on dogs, the conclusion will be reached that in its primary effects, ether is much the safer. What is true of the dog in this instance is true of the human race. The essayist's conclusions, based on the experience of other men, is that ether is about five times as safe as chloroform. Those who prefer chloroform say that while ether is safer on the table, the after effects lead to a considerable mortality. I believe this opinion is gradually losing ground. It cannot be said that ether produces kidney disease or aggravates it any more than chloroform, and I cannot understand why so many still prefer the more dangerous anaesthetic. When a man gets in the habit of giving ether, it is as convenient as chloroform and the time required is very little greater.

I observed the practice in Dr. Mayo's clinic, where ether is given exclusively by a nurse who had given it at the time I was there eight thousand times. The patients were always brought into the room before the anaesthetic was commenced, and it was administered under the surgeon's eye always. She required from three to eight minutes and the patients were not smothered in the old-fashioned way. They went under it very quietly.

Some surgeons first anaesthetize with chloroform and then change to ether. This is a dangerous practice, because the most perilous time in giving chloroform is the early period. If gentlemen insist upon chloroform, let ether be given first and then change.

As to the charge that the anaesthetist is culpable if he knows what is being done to the patient by the surgeon, I say that in order to give it intelligently he must know what is going on, how much blood is being lost and how much longer the operation is likely to continue. To glance at the operation now and then is part of his duty. I have no patience with the

fellow who keeps his nose so close to the cone that he anaesthetizes himself.

Dr. Ireland (closing): I think the point is well founded that ether is five times safer than chloroform and I cannot conceive why we should not use it unless specially contra-indicated. I believe the larger our experience with both anaesthetics, the more we will prefer ether. I have given chloroform more than ether, because in my early experience I used it for the reason brought out in the paper—habit. Dr. Schachner was the first to insist that I give ether instead of chloroform and I shall ever feel grateful to him for it.

Dr. Bullitt speaks of the beginner deriving some experience from anaesthetizing dogs, and his plan is excellent. I have used ether on dogs a number of times and find it is much safer than chloroform. I do believe in using chloroform before giving ether to the stage of unconsciousness. The point of danger depends upon to what extent we carry chloroform anaesthesia. Hare states that it can be done with absolute safety to this degree because the effect of chloroform is first upon the brain and unconsciousness is lost long before danger arises.

There has been a good deal said and written about the cause of death from chloroform and there are two sides to the question. The experiments of Wood and Hare and all others prove that chloroform is depressing to the heart but it has been proven by the majority of investigators that chloroform kills by respiration failure as well as ether. Hare entirely agrees with this, but thinks the early respiratory failure is due to vaso-motor paralysis, bleeding the man to death in his own veins, producing anaemia of the respiratory centers. I fully agree with Dr. Hare's ideas on the subject. The heart usually continues to beat for a short while after respiration ceases.

MASTOIDITIS IN GENERAL PRACTICE. *

J. A. STUCKY, M. D., LEXINGTON, KY.

A few years ago the general surgeon labored earnestly and eloquently with the rank and file, the backbone of the Medical profession, the general practitioner, to make him appreciate the necessity of early recognition of appendicular inflammation, and with the same earnestness urged the value of prompt surgical interference. After much pleading and teaching, success crowned the surgeon's ef-

forts, and as a result of this, scores of lives have been, and are being and will be saved, and few practitioners there be who are not familiar with McBurney's point, and the minutest evidence of inflammation of this unknown quantity so dangerous to life when diseased. For several years the otologist has been making the plea similar to the general surgeon's for early recognition of suppurative disease of the mastoid cells, and urging prompt surgical interference—and the plea is being slowly heeded in the East and North, but less in the South and West. I myself have been rather on the conservative, or waiting list, preferring to see marked systemic disturbance or external evidence of pus formation before resorting to the knife or chisel. Experience within the past two years has wrought decided changes in my views, and the object of this paper to the general practitioners of my own State, is to briefly call their attention to these, which are matters of great importance to them.

An unusual number of cases of mastoid disease in the last six months and lessons learned from them, has led me to look up the records of the limited number of operations performed for its relief. In forty-seven cases operated upon, in sixteen pus had rotted out the cellular structure of the process, burst through the cortex and had welled up beneath the periosteum. In four cases there was in addition to the great destruction of bone tissue, profuse granulations were found, and the lateral sinus exposed. In one case the sinus was so eroded that it was ruptured while gently scraping off the granulation tissue with the finger and blunt probe. In eleven cases pus had perforated the tip and buried beneath the sterno-clido muscle. In six cases the roof of the tympanum was eroded and the dura exposed. In three cases the middle fossa was honeycombed so that probe easily penetrated. In four cases osteo-sclerosis involving the whole process, obliterating all pneumatic spaces as well as the antrum. In thirty-one cases marked septicaemia existed. The disease had existed in the ear from one week to seventeen years when patient was first seen by me. In every case thoroughly removing the mastoid process gave prompt and permanent relief. All of these cases were first seen and prescribed for by the general practitioner—many of them presenting no marked evidence of the disease, hence no special attention was called to the ear until external evidence of swelling and fluctuation or grave constitutional symp-

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toms which could be traced to no other cause, presented.

From the above record of my limited experience in private practice, I am led to believe that the average practitioner does not appreciate the gravity of suppurative disease of the ear nor equip himself with the facilities for recognizing serious complications, either in the acute or chronic form. When it is remembered that the average case brought to the otologist 75 per cent. of the acuteness of hearing is lost before coming for treatment, one reason for apparent failure to give relief is found. Ignorance, superstition, and indifference in regard to ear diseases of any form, has no room for existence today. Because of the involvement of hearing when the function of the tubo-tympanic cavity is in the least interfered with, our chief attention is centered upon these, and we forget and neglect other portions which if diseased will not only prolong and make permanent the functional trouble, but are liable to lead to systemic and meningeal sepsis.

It matters not whether the otorrhoea be acute or chronic it should be carefully watched and any invasion or threat of invasion to the deeper structures be met with prompt surgical interference. No less an authority than McEwen says "Otorrhoea is a menace to life, is insidious, not certain as to when or where it may end. It advances often without pain until the whole mastoid cells, antrum, and middle ear are rotted out, the meninges and blood invaded. As long as the middle ear and recesses are the seat of pus secretion, they are liable to become the focus for pathogenic organisms which may find their way into the general circulation and meninges." The average case of chronic otorrhoea cannot be wiped out or medicated into a healthy condition. Richards: "In spite of what has been written and spoken on this subject in recent years the general practitioner does not appreciate the danger to the organism which resides in the purulent diseased conditions of the ear. When the profession and the community as a whole begin to realize that as Bayard Holmes has stated, mastoid antrum disease is the appendicitis of the head, and that every case of chronic suppuration of the middle ear is a slumbering volcano or a charge of dynamite liable to explode at any time, then, and not until then, will suppurative diseases of the ear be treated with a full appreciation of their possible gravity."

Don M. Campbell says: "What appendicitis is to abdominal surgery, mastoiditis is to

intracranial surgery. Whenever the mastoid cells are infiltrated with pus there is an ever present source of infection, and the removal by surgical procedure is an ever present and pressing necessity, whether the process be chronic or acute."

Many other writers eminent in the Otological world could be quoted to corroborate what has been said, and these things being true, is it not as dangerous and as culpable to wait for systemic infection and external evidence of pus formation in the mastoid as in the appendix!

The lesson to be learned is, the only safe treatment for suppurative mastoiditis is an early opening of the cells and the establishment of free drainage, thus getting rid of the disease entirely or else making the point of least resistance *from* the brain in case of subsequent infection. Under aseptic precautions, the operation is practically devoid of danger. Delay in doubtful cases may lead to more serious complications.

Micro-organisms may find their way into the Mastoid cells and lie dormant for some time or may give symptoms of a mild mastoiditis. Treatment may cause all symptoms to subside until some exciting cause may lead to congestion or firing up of the tympanic membrane, when the germs again become virulent. When in doubt whether there is pus formation, if there be evidence of Mastoid involvement, as is evinced by pain in deep structures which is intensified by deep pressure of the thumb, it is safer to have immediate exploratory operation rather than to attempt to abort by blood letting, ice coil, or heat.

Since the function of the mastoid cells like that of the appendix is still a question of doubt, both when diseased a menace to health and life, their removal should not give so great concern.

Randal says: "Embryology shows us that the Eustachian tube, tympanum, and mastoid cells are one complex structure; the last while merely adventitious adnexa, we may yet learn to better appreciate their unity—we may regard them as unimportant."

Observation and experience are daily confirming the statement of anatomists and physiologists that both the appendix and the mastoid cells are "adventitious adnexa," and may be regarded as unimportant; so far as our present knowledge goes, may we not regard them as valuable in that they are the medium through which danger signals may be hoisted. When micro-organisms appear, they attack the point of least resistance—in

the abdomen it is usually the appendix, in the mastoid antrum, the cells below—in either case the best place to give the warning of danger and easiest and safest through which to remove it.

The cause of mastoiditis is usually the same or is secondary to that which produces acute middle ear infection.

Three phases of this disease may be considered briefly, (1) acute, (2) sub-acute, (3) chronic.

In acute mastoiditis the pain may be severe often ceasing on occurrence of a discharge. Tenderness to pressure being most marked over the antrum and at the tip of the process. Temperature may vary from sub-normal to 104 degrees.

Chilliness may be present or absent. In the severe forms pain may radiate from the ear over the side of the head, backward to the occiput, upward to the vertex and forward to the frontal region. Headache and sleeplessness are usually prominent symptoms. The best way to abort a case of this kind, is early paracentesis, but there are many cases where neither this nor any other treatment can prevent progress. The cause lies in the peculiar arrangement of the temporal bone. In some

size of mastoid antrum, middle ear and mastoid cells. Also their exact position and relation to cranial cavity. (Barnhill).

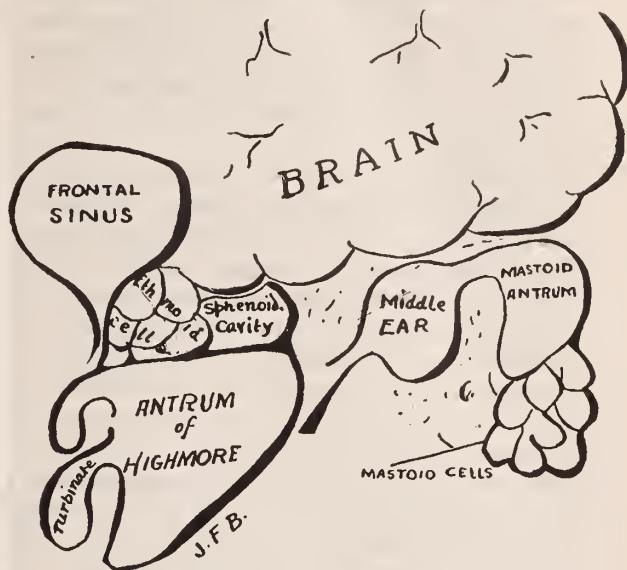


Fig. 2. Diagrammatic drawing showing the relation of the system of open sinuses surrounding the base of the brain, any of which may furnish foci for the infection of the cranial contents. (Barnhill.)

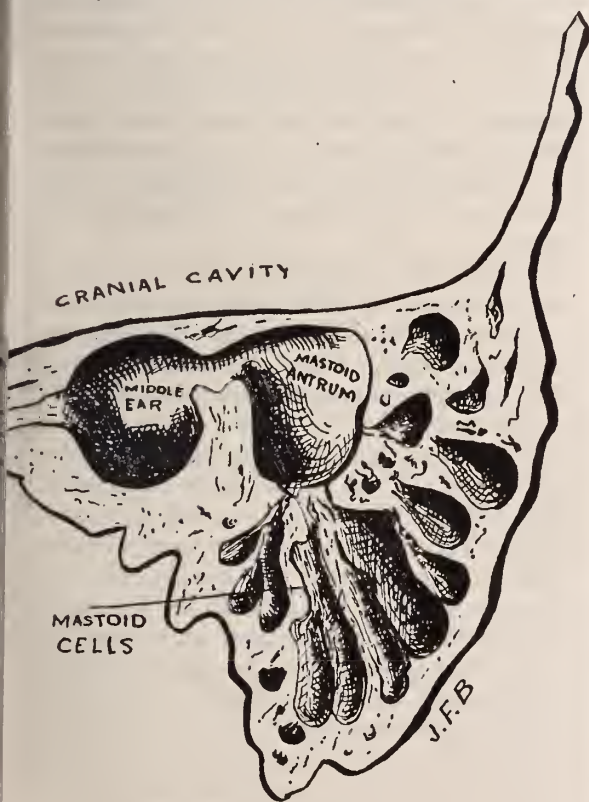


Fig. 1. Drawing of a section of the temporal bone made so as to show relation and

the floor of the antrum is as high as the opening of the aditus, occasionally it is higher, while in others it is lower. In the one case there is relatively free communication between the antrum and the middle ear, so even after the infection had reached the antrum, there is an outlet for the secretion. In the other there is a kind of a cul-de-sac, and where this is affected, it cannot recede.

The sub-acute phase of the disease is usually met with a week or more after symptoms of the acute were manifested. The pain is not so acute or constant, and is usually intermittent, often skipping a day, leaving the patient comfortable. When the attack returns, it is intense, and there is constant tenderness on deep pressure, especially at the tip and close behind the ear over the antrum. "During the attacks of pain the face is somewhat drawn, and has the unmistakable look of one suffering deeply. The pain shoots to the vortex, occiput, or to the frontal region, and may be of long or short duration. Between the attacks, which may be absent for hours or days, the patient looks bright and cheerful, but on inquiry it will be found that the night's rest is broken, and that the cause is due to soreness of the head. The discharge may have ceased, it is usually slight at this stage but occasionally it is very profuse.

The temperature is irregular and prostration not marked. Almost any measure will control or check the pain at this stage for a time, but nothing is more undesirable than the administration of opiates, because it masks the pain, while perhaps pus is slowly burrowing to the dura or forming an infective thrombus of the lateral sinus.

In the chronic phase are included all those in which there is previous history of Mastoid disease, with constant discharge of pus from the attic region of the tympanic cavity, which leads us to suspect long continued disease of the antrum. There is little or no pain, except occasionally, but evidence of mild form of sepsis as shown by general malaise and pallor. All varieties of destruction of the tympanic membrane may be present, the ossicles necrosed and granulation in the tympanic cavity. LaGrippe selects these cases for violent acute exacerbations.

Sclerotic changes in the bone due to prolonged suppuration, favors the extension to the intercranial structures because the obliteration of the cellular structures of the Mastoid makes it the point of greatest instead of least resistance. In this form we have the formation of the cholesteatoma and granulations, which by blocking the outlet lead to a low sepsis from the absorption of pus.

My experience in the last few months justifies, I think, my enthusiasm and earnestness in the presentation of this topic for your consideration, and while I urge prompt and thorough surgical interference in class of cases considered, I by no means desire to be understood as believing that even the majority of cases of middle ear suppuration should be so treated. Recently I have performed the Mastoid operation on three cases, two of whom I have treated for acute Mastoiditis on several occasions in the last ten years. At intervals more or less prolonged, they have suffered with what I have termed Mastoid neuralgia with hysteria. One had contracted the drug habit on account of the pain. In neither case was there external evidence of Mastoid cell suppuration. The other case has frequent pain in occiput, and discharge of pus almost constantly. The third case had been troubled with suppuration for seventeen years, with much headache and suppurative acne which greatly disfigured her. The dermatologist said the acne was due to absorption of pus from the ear, but I could find no reason for opening the Mastoid, and there being no drum membrane and free drainage, I ques-

tioned the cause assigned for the pustular acne. In first two cases an attack of Grippe fired up the old trouble, and all the symptoms pointed to opening of the Mastoid. This I did and to my chagrin, not a single pneumatic space nor drop of pus was found in the entire Mastoid process, but on the contrary, a typical osteo-sclerosis, in which the bone was so eburnated that the edge of the best heavy chisel was turned. The antrum in one case was contracted, in the other absent—in both cases the roof of the tympanum was eroded and the dura exposed. The third case was fired up by a case of facial erysipelas—in this case the same condition was found as in the first, except the small antrum was full of pus and granulations, and more destruction had occurred in the tegmen tympani. In all three, the operation gave complete relief from pain, dizziness and discharge of pus. And in the last such a change in the pustular condition of the face, that the woman looks like a new creature.

In two other cases where I urged surgical interference, which was refused, Otitis Meningitis developed and death resulted.

The most common serious sequelae to be met are, (1) general sepsis, usually of a low form, frequently showing itself in an enlargement of the lymphatic glands often ending in suppuration. (2) Osteo-sclerosis resulting in obliteration of the cells, but never doing away with the diseased antrum and tympanum. (3) Cholesteatoma. (4) Meningitis. (5) Epi and subdural abscess. (6) Sinus thrombosis.

In conclusion I would emphasize the fact that I know of no disease the symptoms of which are more misleading than the one under consideration. Pain, temperature, and pulse, and general systemic condition often do not give evidence of the serious destruction of tissue and rapid inroads being made upon the vital centers. These are all to be considered, but in addition to these the sense of sight and touch are the most important adjuvants in our examination. With the ear specula and the mirror the auditory canal should be thoroughly examined, and any sagging or bulging of the posterior superior wall be regarded as a pathognomonic evidence calling for immediate operation. Pressure which causes pain over the antrum or tip of the process after the third or fourth day of an acute Otitis Media in which there is a free drainage through the tympanum, with systemic disturbance, is also an indication for surgical interference. By

pressure I do not mean gentle touch or rubbing with the finger, but deep, firm pressure. The disease suspected is not superficial but deep, not only so but covered by firm, dense cortex of bone. Percussion and deep pressure first of the healthy, then of the diseased process, care being taken to use the same force upon each side, just as we do in pulmonary examination.

It is now the consensus opinion of the leading Otologists, that it is eminently wise to operate upon cases of chronic suppuration in the quiescent state; both because the inflammation and irritating character of the discharge from the ear are producing destruction of the Middle Ear adnexae with consequent progressive loss of hearing; and also because sooner or later the disease is almost surely, like chronic appendicitis, to require operation at a future time, when probably the tissues will be at a lower stage of vitality. During the quiescent period when there is perhaps an entire absence of pain, the Stacke operation can often be done, involving a shorter convalescence. There is always danger in delay, but perhaps never more so than in the acute stage of mastoiditis, when involvement of important structures may be very rapid and often fatal.

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DISCUSSION.

Dr. D. M. Griffith, Owensboro: The doctor has certainly given us an excellent paper upon this interesting subject.

He has presented the subject in a manner that will be of special value to the general practitioner. It is only within the last few years that the general practitioner has really been paying attention to work in this line.

I agree with the doctor in regard to mastoidectomy and appendectomy. It is true that this disease involves different tissues, and locations, yet there is an analogy, especially in the danger of complications.

Few conditions offer more inviting results to the operator than appendicitis and mastoiditis. The doctor has told us that just as in appendicitis, the patient can be saved by performing appendectomy, so can the hearing and health be saved in mastoiditis by mastoidectomy. To neglect either is dangerous to life. To fail to operate in appendicitis has frequently caused death, and the same thing may occur in mastoiditis.

Above everything else that he says, I want to emphasize his declaration that every general practitioner should be capable of diag-

nosing mastoiditis; he might have gone further and said that they should also be able to diagnose diseases of the middle ear which precede mastoiditis.

The most frequent cause of mastoiditis which I have met with during the last year is lagrippe, which causes an inflammation of the middle ear and later involves the mastoid.

The specialist will appreciate the necessity of early diagnosis, and the necessity of recognizing troubles of the middle ear, when he recalls the large number of cases which should have had attention in the first few days. In the great majority of cases, the general practitioner is the first to see them.

* * *

Dr. J. F. Reynolds, Mt. Sterling: I am glad that I have had the opportunity of hearing the reading of the paper which has so ably done justice to the subject of mastoiditis.

The family physician should be thoroughly familiar with this subject; he should know what pathological changes are taking place in the middle ear, the mastoid and the antrum, for he sees these cases in the beginning, and should be familiar with the symptoms, as the success of treatment largely depends upon an early diagnosis of the case.

The great question in mastoiditis is, when to operate.

Dr. Stucky has said that an early operation should nearly always be performed.

In my opinion, in a great many of these cases we can avoid the necessity of operating if we use the antiphlogistine treatment, namely cold pack, mercurial unctions, hot applications where desired, and an early paracentesis through the upper and posterior quadrant of the membrana tympani.

I am sorry the doctor did not get to finish his paper so as to describe the operation which should be performed in the majority of these cases.

In my mind, it should always be the radical operation.

The mastoid antrum having been laid open, we should thoroughly curette all granulations that we find in that region. I think it better to do Horner's plastic operation. If this is done, we usually get better results, and the wound heals more readily.

If we do an early operation in these cases, we are liable to meet with multiple abscesses but after the eighth day, these will usually come together into one abscess, and the healing will progress more satisfactorily.

Dr. Dudley S. Reynolds, Louisville: I listened attentively to the essay, and to the discussion, but I failed to hear any description of the procedure for relief of the conditions mentioned.

Mastoidectomy means to cut out the mastoid, and I fancy that that was not what was intended, but simply to open it.

My idea is, that the Essayist meant to tell us that there is a time when a puncture of the drum membrane should be made, and that that time is at the very beginning, and that he opened the membrane in its posterior inferior quadrant. This is the place where pus is most likely to be located; at least, that is where gravitation will naturally carry it.

The time to open the mastoid is that time immediately after severe pain is felt, and especially if it is increased upon pressure, and I do not believe it is right to fool away any valuable time with cold packs, hot applications, or with that most barbarous practice of putting leeches on people to suck blood out, instead of applying the surgeon's knife.

Cut through the mastoid process, through all the soft structures, to the hard bone, and if necessary cut through the outer plate of bone which will open into the mastoid cells, and allow free drainage.

This is the only operation, I believe, that the general practitioner is qualified to do. The operation is successful if done in the very beginning, but if you wait until the pus has invaded the neighboring sinuses, then the greater operation will have to be performed.

* * *

Dr. J. M. Ray, Louisville: I was very much interested in this paper. I think every man who does otological work should be interested in it. Had the doctor been permitted to finish he would have taken up the subjects which some of the speakers have called attention to.

In acute mastoiditis, the mastoid antrum should be our point of attack, as we know exactly where this is always located.

I think the drill is the most dangerous instrument that could be used. We must see exactly where we are going.

We should go very slowly because you might strike the lateral sinus. I have seen a case where it came up almost to the wall of the canal. Had you taken a drill in such a case, you would have gone into the lateral sinus before you knew what you were doing. It is better to take the mallet and chisel, and

remove layer after layer, and examine carefully after removing each piece.

By cutting into the antrum first, we know exactly where we are and can then follow up the pus channels, in whatever direction they may take. One thing to guard in operations in acute cases is to protect the back wall of the canal and the membranous canal, otherwise you are likely to get stenosis in the healing.

* *

Dr. Stucky, closing: If I had been allowed just two minutes longer, I think my paper would have settled some of this discussion.

The operation described by Dr. Reynolds is the classical mastoid operation, and not the radical operation which is the Stache-Swartz. I do not know of anything I should hesitate more to use than a drill. The majority of otologists object to the use of this instrument in any form. The antrum being the seat of the disease, it should be the objective point, hence begin there, and not at the tip; to begin at the tip to operate I regard as unsafe.

I am against the use of the leech on general principles. If I use any local treatment at all, it is dry heat.

I did not attempt to write a paper on the treatment of an operation for mastoiditis, but confined myself to the necessity of the general practitioner recognizing the disease early and educating his clientele to the necessity of giving immediate attention to the condition, for the same reason that he would do so in appendicitis.

KENTUCKY NOTES.

CLOG DANCES AND MEDICAL SHOWS

Office of the State Board of Health,
Bowling Green, Ky., June 24, 1904.

To the Medical Profession of Kentucky:

Official notice is being sent this week to the medical referees and county boards of health of the enactment of the following as section 8 of the new medical law, which became effective on June 13th.

"Section 8.—"That any itinerant medical company of two or more persons traveling as a troupe or company as vendors of any drug, nostrum or instrument of any kind, intended for the treatment of any disease or injury, or who shall, by any writing or printing, profess to the public to treat disease or deformity by the use of any drug, nostrum, or instrument, shall pay to the board a license of \$100 per month, which shall be at once covered into the State Treasury. The board shall issue a license to reputable and worthy applicants un-

der this section upon the payment of the fee each month, but may for sufficient cause refuse such license. Any such itinerant vendor traveling as a company or troupe, with two or more persons as members or in its employ, who shall treat or profess to treat or cure disease or injuries by the use of any drug, nostrum, or instrument without license to do so, or shall sell the same for such purpose, in violation of this section, shall, upon conviction, each and every person so engaged, be fined fifty dollars for the first offense, and upon each subsequent conviction shall be fined one hundred dollars."

Arrangements had been made to arrest Cooper in Louisville the day the law went into operation but he left the State before that time. I found a troupe of the same kind in full blast at Bowling Green on my return from Atlantic City, but they were in Tennessee before the warrants could be served, although the leader had an individual license under the old law.

My information is that there are other troupes of this kind operating in the State and we want to go after them so vigorously as to get rid of them once for all. None have applied for license under the new law and an old license gives no authority to the holder if he is with a troupe.

This class has preyed upon the people of Kentucky long enough and, as this law was designed to put a stop to their nefarious practices, our friends are requested to co-operate with their respective county boards and attorneys in securing the necessary proof for their prompt and successful prosecution.

Very respectfully,

J. N. McCORMACK,

Secretary Kentucky State Board of Health.

MEDICAL COLLEGES IN LOUISVILLE.

The following letter was sent to each of the Deans of the five regular medical schools in Louisville. It drew an acknowledgment and declination from one of the schools, no notice from two of the schools, and the appended letter and dissertation on higher medical education from the remaining two.

It is to be regretted that the Dean of the Kentucky School of Medicine did not tell us what he is doing in the way of admitting and educating young men, and what he proposes to do in the coming year, rather than give a theoretically beautiful but somewhat extended essay on "the basic principles of mental science in its relation to the acquisition of knowledge."

Dear Doctor:

The college question and situation is one of great importance throughout the country and especially so in Kentucky and Louisville. I feel sure that the readers of the Kentucky Medical Journal would like to know what the status of college affairs is at the present time and how college men themselves feel about matters. I am, therefore, inviting each of the deans of the several Louisville schools to write for me an article on this subject, not to exceed eight hundred words in length.

I should be very glad to have you contribute to the symposium. The article should be in my hands by July 1st, so that it may be published in the July issue of the Journal.

Very respectfully yours,

JAMES B. BULLITT, Sec'y.

* * *

June 27th, 1904.

Dr. James B. Bullitt, Editor.

Dear Doctor: Replying to your invitation of June 24th, I beg to offer the following considerations:

I will confine myself to a few remarks bearing upon the basic principles of mental science in its relation to the acquisition of knowledge, and the cultural capacity to use it in the study of the various scientific branches leading up to the degree of Doctor of Medicine, and to the kind and extent of recognition that should be given by the medical school for the bachelor's degree, or for work done in the college of arts and science.

Our highest aim in mental, intellectual and moral development, should be perfection and happiness, and these so coincide as to constitute a single end, and if the end is not used as a mean for further mental speculation, all progress ceases.

With the possession of all knowledge and truth, but without the power of intellectual cultivation and progression, life would be unbearable, and we would be little better than so-called educated barbarians.

Truth is absolute, but speculative truth is valuable as a mean of intellectual activity, and its relative value a utility not prized on its own account, but because it is conducive to the attainment of something else. Then, in efforts to possess many truths, we must also educate the mind to use these truths as means for the accomplishment of useful ends.

The possession of knowledge as an end is worthless, but knowledge as a mean in the further search after truth inspires mental activity, without which there can be no intellectual

life; for all life presupposes the existence of an active force.

While the search after knowledge is active, its possession as an end is passive, and can only have utility where as a mean it is used by the active mind. Then knowledge and wisdom are only related, the one in a degree being the complement of the other, each necessary to the existence of the other; but knowledge must be mainly subordinated to cultivation of the mental faculties. Truths then, are but the silent material out of which the mind constructs, and the extent and perfection of results are in proportion to the degree of mental force, and the number of accumulated facts; therefore the philosophy of the mind must include a subjective and an objective utility, the one to call the intellectual faculties into existence, the other to furnish the mind with the objects of knowledge.

In speculative mental science, we do not find the same utility in the various branches of education, and the utility in any branch may be modified by environments; but the most effective mental force may result from the convergence of the utilities of many branches, for the harmonious unity of many forces yields relatively increased results.

Culture and wisdom presuppose the possession of truths, but the value of those truths is in the ratio of the mind's force to use them in further speculative research. Knowledge must be possessed, digested, assimilated and appropriated, and the perfection of results is measured by the perfection in the processes of mental action, but the utility of little knowledge correctly used may excel the utility of much knowledge with imperfect mental activity. Education then means the acquisition of truths with the acquired cultural capacity to use these truths in the processes of mental speculation to develop other useful truths; it is the friend of knowledge and the lover of wisdom.

The teacher does not educate, but supplies the facts and furnishes the stimulus that enables the mind to educate the mind, by turning the mind inward on itself, thus concentrating its forces in the development of mental energy and intellectual growth, for intellect is not perfected by knowledge, but by active and continued energy; "an energy conversant about knowledge." This principle has been accepted by the profoundest philosophers, who make "speculative truth subordinate to speculation itself," men who are not only possessors of knowledge, but

seekers or hunters of truth, whose perfection of cultural development is in proportion as the activity is spontaneously intense; and who feel that instruction can only enable us to teach ourselves.

No conscious fact observed by another can be accepted until observed and recognized by ourselves through a process of mental activity and intellectual growth.

In a study of the philosophy of the mind, we must admit that the sooner a student accepts instruction as a mean by which he may exercise his mental faculties, by the use of the truths given by the instructor, in the attainment of further intellectual power, the sooner and more perfect will be the development of these faculties. From the philosophy of the instructor, the student must philosophize, and the acceptance of the principle of doing everything for himself, enables him to obtain from the study of mental science the best intellectual exercise, and the most healthful development of the mind.

While the value of knowledge and speculative truth must be mainly measured by the intensity of energy and activity, this should not be at the sacrifice of too much breadth of sympathy or thought; and just here arises the question as to the wisdom of including in the college of arts and science any or much of the study of the sciences that have a direct application to the art of medicine and surgery. In deciding this question, we must consider the influences of the ethical environments, in determining both the cultural and practical value in the study of the embraced branches, separately and collectively in their relation to the perfected education in medicine. While it may be contended that these sciences studied in the college may give the student increased breadth of sympathy, it must be conceded that this breadth is secured at the cost of too much loss of intensity of application, except in isolated instances. It must also be remembered that medicine being an art, can be best perfected by the combined utilities of many sciences, with a spontaneously active and continued convergence of the resultant forces; and that this intensity may be acquired with practically no loss of breadth, for culture in its broadest sense is typified in medicine by the most useful application of scientific truths; and this use of knowledge can best be acquired under the direction of an instructor who perceives and practically comprehends the conditions and purposes for which such knowledge

is needed. I do not mean by this that students may not attain much useful knowledge in preparation for the study of medicine by including progressive sciences in their academic course, and I would give full credit in the medical education for all work successfully completed, but the direction in the application of this scientific knowledge must be intrusted to the instructor in the medical school. I am not speaking of original research in one or more of the biologic sciences, for students who succeed in these lines of work, become more scientists than physicians; in fact, a student who has successfully completed the work included in the curriculum of a four years' medical course, having done much of his biologic work while acquiring his liberal education, will have succeeded in doing but little scientific research, this being mainly deferred for his post-graduate work. The medical teacher will very soon have decided that attendance upon the work of four years in a medical school is not an unreasonable requirement, even for a student with a Bachelor's degree from one of our best universities. Upon careful investigation I am convinced that no college in the United States includes in the curriculum of any or all the years the work embraced in the required branches of the Freshman year of a well equipped medical school. Then let us decide that we will no longer give a time credit for work claimed to have been successfully completed in the college of arts and science, but if the college wishes to accept the Freshman year of the medical course, as the equivalent for the Senior year in the college course, that is a matter that does not and should not concern the medical teacher, for no universal educational requirement for admission to the medical school, can, for many years be higher than a diploma from a certified high school obtained after attendance upon eight years of primary and intermediate work, and four years of high school or secondary work, the time included in each year being not less than five hours a day for not less than forty weeks, this being practically the equivalent for the educational requirement for admission to the Freshman year of the university course.

The adoption of a requirement by the State Licensing and Examining Boards of attendance upon four years work in a medical school is both logical and ethical; it is no injustice to any student, and is in the interest of humanity, because it enlarges the powers of the physician in his efforts to prevent and cure disease. The medical school that insists

upon the privilege of allowing a time credit for a Bachelor's degree, or for work done in the college, is influenced by commercialism, and is not in sympathy with the spirit of the age that encourages the acquisition of the greatest amount of truths consistent with the cultural capacity to utilize them in the attainment of the most perfect results in the development of intellectual, moral and physical health.

The four required courses in a medical school should have a minimum of not less than seven continuous months in separate years, at the beginning of which students may be matriculated, and at the end of which they may be examined for advanced standing, or in the Senior year for the degree of Doctor of Medicine; and no school should be permitted to matriculate students for more than one session annually. If medical schools are not willing to conform to these requirements, then the medical profession, County, State and National Medical Associations and State Licensing and Examining Boards should compel them to do so by refusing recognition to the diplomas they issue to their graduates.

WM. H. WATHEN,

Dean Kentucky School of Medicine.

* * *

June 28th, 1904.

Dr. James B. Bullitt, Editor.

Dear Doctor:

Replying to your invitation of the 24th instant, I beg to submit the following on the college question and situation in Louisville:

The school situation in Louisville at the present time is a matter of congratulation to the various medical institutions; we believe that medical education as conducted in Louisville is of as high an order as any attained in this country. The preliminary requirements which in bygone years were practically nothing, have been materially advanced until now evidence of the matriculate is required showing his mental fitness to pursue the study of medicine; chairs of Medical Latin and Physics have been added to the curriculum and we stand ready to add still more in order to maintain and increase the high standard demanded by the profession of today. The elementary work, being the foundation of medicine, is thoroughly and impressively drilled into the student, the various laboratories are complete in their equipment and appointments, the amount of clinical material is greater than can be used to advantage, and the

addition of infirmaries to the various colleges has enabled their faculties to utilize this material in the best interests of the advanced student, thus giving him practical experience before sending him out to assume the responsibilities of active practice. It has been deemed wise by us to adopt a continuous session, with three periods for matriculation, September, January and April, requiring of the student four terms of seven months each, each in a separate year, before permitting him to apply for graduation. The continuous session has been in use at some of the large universities for years, the advantage offered by it being that the student may enter at the period of the year most suited to him, the fact that the five months between his official sessions may be devoted to practical work, thus spending the entire year in the prosecution of medical study alone, giving him the benefit of twelve months study instead of six or seven as heretofore. The stimulation due to competition among the various medical schools of this city has made Louisville a great medical center and has notably increased the character and efficiency of their work. The amicable relations existing between them is in no little wise responsible for their high standard.

Very truly yours,

C. W. KELLY,

Dean Louisville Medical College.

COCAINE HABIT IN CINCINNATI.

Despite the fact that stringent laws were passed by the Ohio Legislature last winter regulating the sale of cocaine, it is said that the sale of the drug in Cincinnati is larger now than ever before. It is sold principally on the levee and in the sections of the city where the dissolute congregate. It has been reliably estimated that 350 ounces of cocaine, of a value of about \$6,000, is sold every month to this class in Cincinnati.

RED LIGHT TREATMENT OF SMALL-POX.

J. C. T. Nash reports red light treatment in some 30 cases of small pox. Though none of the cases were necessarily fatal by ordinary treatment, the author believes that the suppurative stage was considerably modified and rendered less severe and dangerous by the beneficial influence of the red rays, or rather by the exclusion of the other elements of light. Insufficient experience with this means of treatment, he believes, has led a number to condemn and abandon it, when a more ex-

tensive experience might have led to different views. The results obtained must of necessity depend very much on the malignancy of the disease and the type of the epidemic. Prior vaccination, of course, plays the principal role in lessening the virulence of the disease, but the author is of opinion that his experience fully justifies him in the belief that the red light is of distinct benefit. One disadvantage of the red light ward is that the physical appearance of the small pox eruption can not be appreciated or demonstrated as by ordinary light. (*Lancet*, March 5, 1904.)

STRICTURE OF THE OESOPHAGUS DUE TO TYPHOID ULCERATION.

J. E. Thompson reports three personal cases and has found nine others on record, a resume of which is given: Case 1 was somewhat relieved by dilatation measures, but finally died from inability to swallow. A similar treatment produced permanent relief in cases 2 and 3. As to the exact nature of oesophageal ulceration in typhoid, we have no definite information. Louis considered them as due not to typhoid infection but rather as a complication due to the extreme malnutrition of the tissues. It is very probable that the ulcers at the lower end of the gullet are due to peptic digestion of the oesophageal mucosa. The ulcers have been observed in many cases of exhausting and long-continued sicknesses. It is noteworthy that out of the twelve recorded cases, eleven occurred in males.

(*Annals of Surgery*, May, 1904.)

EXPERIMENTAL STUDIES OF SYPHILIS.

Second memoir: Metchnikoff and Roux described in a previous paper two successful inoculation experiments into chimpanzees, to which is to be added one by Lassar. In 12 further experiments with *Macacus* monkeys, Metchnikoff and Roux succeeded in only four cases. These four cases presented slight lesions, such as those described by Nicolle. The writers are endeavoring to obtain an attenuation of the syphilitic virus by passing it through the *Macacus* species, and eventually other species still less susceptible. The experiments with chimpanzees prove without doubt that the species is susceptible to syphilis, and consequently can be of great service in studying the disease.—*Ann. de l'inst. Pasteur*, 1904. No. 1.

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ONE HUNDRED REPRESENTATIVE
MEN.

The following letter and agreement are self explanatory. They have been sent to representative men all over the State, and it is hoped that a list of one hundred representative men can be secured to carry out the work.

The county societies, on their part, are requested at their first meetings to arrange a schedule of meetings for the year, and to decide at what meetings they desire the participation of the representative of the State Association. This schedule must then be reported to the State Association Secretary.

This work has been done in a small way by a few men, of their own initiative, in the past few years; it is desired to replace these spasmodic private efforts by systematic and united effort. During the past year it has been tried in Ohio, with most gratifying results. Indeed, Ohio's efforts at home have been so successful that she has spared a few of her workers to nearby counties in Indiana and Kentucky. Kentucky must return this favor by sending her representatives to contiguous counties in Ohio and Indiana.

* * *

Dear Doctor: It is desired to secure a list of names of physicians in Kentucky, one hundred if possible, who are willing to go to the meetings of the various county societies in the State for the purpose of stimulating interest and cementing organization. This plan has been tried in some other States, notably Ohio, and has been found to be of great value. In fact this style of missionary work has extended from Ohio across the river into Kentucky, and with good results, so that it would seem a ripe time to start a similar movement in Kentucky.

The plan is to have the county societies give the dates of their meetings for the year, and indicate at what time they would like to have

a representative of the State Association meet with them, then to make arrangements from the list of one hundred to fill these engagements. By carrying out the work from a central office it is believed the plan could be made to succeed admirably.

If you are willing to assist in this work please sign the accompanying agreement and return it at once.

Very respectfully yours,
JAMES B. BULLITT,
Secretary.

AGREEMENT.

Recognizing the importance of the organization of the medical profession of Kentucky, I hereby agree to assist in the work by attending at least one county society meeting (other than my own) during the coming twelve months, such attendance to be arranged for by the secretary of the State Association, and agreed upon by him and me as to time and place.

(Signed)
Name.....,
Address.....

PROCEEDINGS OF COUNTY
SOCIETIES.

The following letter has been sent to the President of each of the county societies in the State of Kentucky:

Dr. President
County Medical Society:

Dear Doctor—As you will have observed from the June number of the Kentucky Medical Journal, the publication of the State Association is now established on a firm footing, and is in position to take care not only of reports from county societies, but also of good papers read before such societies. While the Journal is of necessity the official organ of the component county societies, yet I think it would be well for each county society to pass a resolution expressing this recognition, and at the same time instructing its secretary to send in an official report of each meeting held.

It is practically certain that this will stimulate interest and do much to help the work in the various counties. Will you bring the matter before your county society and have such a resolution passed? Kindly let me hear from you about the matter.

Very respectfully yours,
JAMES B. BULLITT,
Secretary.

It is to be hoped that the county societies will make a prompt and willing response to this request. The Journal will enlarge its pages to as many as may be necessary, and desires to give opportunity to every county in the State for representation in its columns. County society secretaries should have the matter constantly in mind, and keep a sharp lookout for suitable papers for publication. While the Journal desires always good papers, and considers that the best which can be produced in the State of Kentucky are not too good for it, it bears in mind also that it is the democratic mouthpiece of the whole profession of the State, and every reputable physician who knocks fairly at its door will be given admission to its columns.

THE STATE ASSOCIATION AND LEGISLATION.

It is of great importance that all legislation having to do with the affairs of the medical profession should be acted upon by the legislature only on the recommendation of the State Association. This would surely prevent wild-cat bills, representing the interest of one man, or a small coterie of men, from receiving favorable consideration in the legislative halls. If a member of the profession believes something to be for the good of the profession and the people of the State, he should present the matter to the House of Delegates of the State Association. It would there be debated, and if that body believed it for the best interests of all concerned, it would be brought before the legislature with the sanction of the best physicians of the State, and with the help of the legislative committee, would almost certainly pass any Kentucky legislature. The *sine qua non* is that the profession itself shall first be united and harmonious, so that the legislature may come to know what is the opinion and desire of the medical profession of Kentucky. This can be accomplished in one way, and in one way only, by unification, by organization.

AN AMERICAN ASSOCIATION OF STATE MEDICAL JOURNALS,

as proposed in the May issue of the Bulletin of the Kentucky State Medical Association, is practically an accomplished fact. Representatives of a number of States were present at Atlantic City where the matter was fully discussed and unanimously indorsed. Preliminary articles of association were prepared, and a final agreement of association will

be reached when the American Medical Association meets next year.

Those parts of the preliminary agreement which are of special interest to the publisher of the State Journal, to the reader of the State Journal, and to the advertiser in the State Journal, are appended. That the carrying out of this agreement will reduce the revenues of the Kentucky Medical Journal by cutting out some of the advertisements which now appear in its pages, is quite certain. It is perhaps equally certain that the Journal will secure other advertisements because of the observance of these very articles of agreement. Just here it were well, perhaps, to quote the following from the chapter on Principles of Ethics, recommended by the American Medical Association: "It is equally derogatory to professional character for physicians to dispense or promote the use of secret remedies."

If the reader to whose eyes these lines come will pick up the several medical journals lying on his table and glance over the advertising columns, he can only conclude that these principles of ethics, in many cases at least, are dead letters when it comes to medical advertising. The Kentucky Medical Journal is aware that it is not without sin in this matter, and bears well in mind the ancient admonition that "people who live in glass houses should not throw stones." In self defense it can plead youth and inexperience; and can beg for mercy on the same ground as did an unfortunate young woman who was being tried by court for bearing an illegitimate child, that the offense was not so bad, because the baby was such a very little one. And as for living in a glass house, the Kentucky Medical Journal will be happy to have it smashed about its head and be able to step forth frankly and fearlessly, all equivocation and doubt aside, to battle against what it believes to be a great evil.

It asks of the members of the Kentucky Medical Association, and of the physicians both in and out of the State who believe the ground well taken and the abuse and evil a real one, that they support the stand with a hearty good will. We wish them to agree with us in thinking the advice was poorly given by the father who said to his son: "My son, make money; make money honestly if you can; but if you cannot, my son, make money." Primarily the Kentucky Medical Journal is under no necessity of making money; but if it must and does make money, by all means let it be honestly and ethically, and in accord with the spirit of the principles of ethics recom-

mended by the American Medical Association. Objectionable advertisements now appearing in its columns will not appear when present contracts expire, and every precaution will be taken to have advertisements accepted in the future of the proper kind.

* * *

PRELIMINARY ARTICLES OF ASSOCIATION.

The name of this Association shall be "The American Association of State Medical Journals."

Its purpose shall be to federate, for mutual encouragement, support and business interests, the journals now published by State Medical Associations, or which may hereafter be so published; only journals published, or controlled by State Medical Associations shall be eligible to membership.

Its meetings shall be held annually at such time and place as the American Medical Association may meet.

This Association makes the following declaration in regard to advertisements: No State Medical Journal shall accept an advertisement of a medicine which is not ethical. To be ethical in the meaning of this declaration the product advertised must have published with it not only the names of its constituent parts, but also the amount of such constituents, so that a definite dosage can be determined. Further, such product must not be advertised to the lay public through the secular press.

In case a product is advertised under a copyrighted name, the manufacturer shall furnish with it the proper chemical name, and if not patented then also the process of manufacture.

All advertisements not covered by above paragraphs, or which contain extravagant and improbable claims, shall be submitted to the executive committee for approval before they can be accepted.

Editors of State Medical Journals and members of Publication Committees of State Societies shall be included in the membership of this Association.

AN HONOR TO BE ONE OF THEM.

The American Medical Association at Atlantic City was not only the largest, but was one of the most interesting and successful gatherings of medical men ever held in the history of the world. It was so immense, and so many sections and meetings were going at the same time, that one mind could only take it all in a very general way, but every phase of scientific medicine was being discussed by

leaders and experts from early morn to dewy eve somewhere, and the member was hard to please who was not fully satisfied. In fact, the only complaint heard was that one could not be in three or four places at the same time.

The advantage of having all business affairs concentrated in the house of delegates grows in favor with experience. It not only makes the dispatch of business more conservative and satisfactory, because it is in the hands of a small body of men, specially selected for this work and accountable to their constituents, but makes possible the presentation of important scientific matters to the general meetings. The orations of Dock, Mayo and Biggs were all above the mark, and the scientific symposia following them, an innovation suggested by Dr. Musser, and participated in by Welch, Osler, Billings, Sternberg, Wyman, Salmon, Wiley, and others eminent in the special fields represented, were so successful that they will doubtless be made a permanent feature of future meetings.

It was a common remark on every hand that the work of the sections represented to a higher degree than ever before the highest and best in scientific medicine. The only complaint heard was that it was not possible for all of the really great men in attendance to have a place on the program or take part in the discussion.

The selection of Dr. Lewis S. McMurtry for the presidency was of course highly gratifying to Kentuckians and to his friends everywhere. As his friends did not decide to present his name for the position until after the meeting had convened, and as it was opposed by the presentation of the name of Dr. Mayo, of Minnesota, a surgeon of the highest reputation and character, his selection was an especial honor.

No medical man could have gone through the Atlantic City meeting without an increased feeling of pride in his calling, and especially of a higher appreciation of being an integral part of such an organization as this gathering represented.

J. N. McCORMACK.

SECTION WORK IN THE AMERICAN MEDICAL ASSOCIATION.

It is a fact well recognized that the work of the ophthalmologist and aurist is usually of little interest to a body of general medical men. In consequence members of the profession working in these special lines have few opportunities to hear and discuss papers on subjects in which they are especially interested. Hence

we find that the ophthalmic and aural surgeon, unless residing in one of the larger cities where scientific intercourse between the local specialists is possible, seeks one of the national bodies in order to keep abreast with the progress of his science, and where he may exchange ideas with men who have interests in common with his own. A number of such bodies are in existence in the United States and their annual gatherings have been attended with more or less success. However none of them has ever met with the encouragement which is now noticeable in the special sections of the American Medical Association. Small in point of attendance in the beginning, and working together as one body, the section of Ophthalmology and the section of Otology, Laryngology and Rhinology, have in the last few years taken on such growth that they are now working in individual sections, and each is making rapid strides on the highway of success. The recent meeting at Atlantic City, June 6th-10th, was undoubtedly the most successful since their organization. Not only in point of attendance has this been a banner year, but also in the nature of the work done have all previous efforts been surpassed. The roster of these sections contains the names of the best men in their respective lines in the country, and mere mention of the names of such men as Knapp, DeSchweinitz, Bull, Weeks, Casey Wood, Myles, Densch, Pyncheon and others, who were among those in attendance this year, is evidence of the nature of the work being done by the eye and ear sections. Especial interest was added to the sessions this year by the presence of two eminent Scotch authorities who were guests of their respective sections by special invitation. Dr. A. Maitland Ramsey, of Glasgow, delivered an address before the section of Ophthalmology on "The Importance of General Therapeutics in the Management of Ocular Affections"; and Dr. A. Logan Turner, of Edinburgh, entertained the otologists with an instructive and classical paper on the "Surgical Treatment of Chronic Empyema of the Frontal Sinus," with illustrations and demonstration of specimens.

The good to be derived from such gatherings is evident. The incalculable benefit of an annual comparison of experiences with the best men of our country should be the prime incentive to be present at the annual gatherings of our national body. However, the social feature should not be overlooked. The most enjoyable entertainments are the general and section smokers. The smoker of the sec-

tion of Ophthalmology this year, which was held at the Hotel Chelsea, was attended by over 200 men. The Otological division entertained at a dinner at the Hotel Islesworth and was attended by over 100.

Like a large family, meeting in reunion each year, so are the different sections of our great fraternal association, and after attending one or more of the meetings we are wont to look forward, with pleasant anticipation, towards each successive meeting. It can hardly be gainsaid that by daily attention to business, with its drudgeries and hardships without an occasional diversion, all of us are apt occasionally to fall into careless ways and unconsciously to grow disinterested in our work. Nothing is so conducive to a renewal of energy as the getting away from daily routine and meeting with men who are doing original and scientific work. We return to our work after spending a profitable week inspired with a new interest in the advancement of our profession and with re-enforced ambition.

ADOLPH O. PFINGST, M. D.

Editor Kentucky Medical Journal:

I am glad indeed to say a word concerning the Atlantic City Meeting of the American Medical Association, which was I believe the most widely attended meeting of that body ever assembled. One could but be impressed with the character of work done in the various sections, which was high class and of great scientific worth. The only possible regret one could have is that he could not attend the meetings of all the different sections; yet any one was found sufficiently interesting to make the trip of great benefit. It is indeed a pleasure as well as profit to meet the progressive men in our profession, assembled from the entire country, to hear their opinions and gain practical points from a comparison of ideas. A man cannot fail to be broadened by such contact, and will return to his work with greater incentive to better things. I can but urge that more of the members of our State Association join us in these meetings and feel that all who do so will be abundantly repaid.

Sincerely,

J. GARLAND SHERRILL.

SURGICAL PROCEDURES FOR THE RELIEF OF CHRONIC EMPYEMA OF THE FRONTAL SINUSES.

A question which is now agitating the minds of the Rhinologists is the perfection of the surgical procedure for the relief of chronic

empyema of the frontal sinus with a view of making the operation radical and at the same time doing away with the ugly deformity resulting from former operations. Much of the time of the rhinological section of the American Medical Association at the recent meeting at Atlantic City was devoted to this subject. The chief address of the session made by Dr. A. Logan Turner of Edinburg, Scotland, contained an elaborate exposition of the various operative means and their advantages and disadvantages. Operative interference in abscess of the frontal sinus is not new, though it has only been in comparatively recent years that radical measures have been adopted. For years the cases were treated by simply trephining, but in the last few years quite a number of radical operations have been developed, the aim of all of which is to obtain a free exposure of the sinus cavity and to remove the mucous membrane. They differ principally in the position of the skin incision and the choice of the sinus wall removed. Some authors, among them Jansen of Berlin, enter the cavity by preference through the inferior wall or orbital plate, while other operators advocate entering the sinus through the anterior wall. Principal among these is Kuhnt, whose operation has until very recently been almost universally employed. It has for its object the removal of the entire anterior wall of the sinus and ridding the cavity of all of its lining mucous membrane and osseous septa, forming a wide avenue of communication with the nose by enlarging the naso-frontal duct.

The operation is radical and is attended with uniformly good results. Its greatest imperfection lies in the extensive facial disfigurement resulting from it. Even with subsequent paraffine injections to fill out the depression the cosmetic effect is only fairly good.

The question to solve then, was how to gain complete access to the cavity without bringing about the objectionable deformity. Prof. G. Killian, of Freiburg, has recently introduced a method which seems to meet both requirements. He removes both the anterior and inferior walls of the sinus but leaves the superior orbital edge intact to form a bony margin. The mucous membrane of the cavity is removed and all of the bony septa broken down. Access is gained to the frontal and ethmoidal cells by resecting the frontal process of the superior maxillary bone and the diseased cells are removed. The ostium frontale is enlarged with a curette. The external wound is usually

sutured immediately upon completion of the operation. This operation of Killian has been employed in this country in a limited number of cases with as much success as the Kuhnt operation. Cosmetically it offers great advantages over the latter. While the operative treatment of chronic empyema of the frontal sinus still furnishes a fertile field for study we must welcome the improvements in the operative method, suggested by Killian, as a decided advance in the treatment of this class of cases.

ADOLPH O. PFINGST; M. D.

WARNING AGAINST YELLOW FEVER

Dr. Taber, the Commissioner of Health of Texas, has sent an official communication to the Governor requesting the latter to issue a proclamation warning the people of the State of the imminent danger of a yellow-fever epidemic if they neglect the first principles of cleanliness and sanitation in their houses and communities. On account of the open winter of 1903-4 in southern Texas and the prevalence of yellow fever in Mexico at present, he says he greatly fears that should a case be introduced into the State with the present very bad sanitary condition of a large number of the cities and towns and the presence of the yellow-fever mosquito, which also exists in large numbers throughout the State, there will be the most extensive epidemic of yellow fever ever known. He therefore urges the Governor "to issue a communication calling upon the county judges, mayors, and health officers of Texas to inaugurate sanitary campaigns in every community in the State without delay, especially for the destruction of the mosquitoes."—*Med. Record*, July 2, 1904.

INFLUENCE OF RADIUM UPON VEGETABLE ORGANISMS.

In view of the increasing interest in radium, the experiments of Dixon and Wigham on the influence of radium upon vegetable organisms are of importance. They found that upon seeds and algae the radium emanations had but slight effect. When bacterial cultures were exposed to the rays, however, the growth of the micro-organisms was arrested within the area subjected to the emanations. This was not due to destruction of the bacteria in the sterile area, for they could be successfully transplanted to other media. (*Dublin Jour. Med. Science*, March, 1904.)

PROGRESS IN GENERAL MEDICINE.

By J. A. Flexner.

SOME RECENT ASPECTS OF THE TUBERCULOSIS PROBLEM.

"Science," of June 17th, contains some interesting extracts from the ad interim report of the commission which was appointed to investigate the subject of bovine and human tuberculosis. The personnel of the commission is fortunately such that their conclusions would under any circumstances have the greatest weight, and that they have not been able to confirm Koch's ill-considered statement of the racial differences of bovine and human tuberculosis will not surprise those who have been following the development of this subject since Koch's surprising paper was read in London. The commission is composed of Sir Michael Foster, Prof. Woodhead, Prof. Sidney Martin, Prof. McFadyean and Prof. Boyce. It is scarcely necessary to reiterate the details reported as these are not complete, but the concluding paragraphs are so direct and apparently conclusive that we extract them. They state "We have very carefully compared the disease thus set up in the bovine animal by material of human origin with that set up in the bovine animal by material of bovine origin, and so far we have found the one both in its broad general features and in its finer histological details, to be identical with the other. We have so far failed to discover any character by which we could distinguish the one from the other, and our records contain accounts of the post-mortem examination of bovine animals infected with tuberculous material of human origin which might be used as typical descriptions of ordinary bovine tuberculosis. In conclusion they state that their results were obtained from a study of more than two hundred bovine animals and in a fuller report to be submitted later, many pertinent questions which have arisen during the progress of their studies will be answered "as well as the question why our results differ from those of some other observers." It is to be hoped that the publication of the full protocols of these extensive studies will for ever close this question and permit the effort for the eradication of tuberculous cattle from our herds to go on without this stumbling block, so needlessly put in the way. The extent to which our state herds are infected with tuberculosis is greater than we probably think. The results of the examination of the herd at the Lakeland asylum seem to indicate as much. The first step towards the bettering of the con-

dition must come from the medical profession and reasoning by analogy, no voice other than the stentorian tones of the entire profession of the state will make any impression on the auditory apparatus of the body which meets in Frankfort, and from whose fertile brains the full details of the plan will have to be formulated, which will accomplish one of the most important steps in the eradication of human tuberculosis. That the destruction of tubercular cattle is a proper function of the state is not debatable. So long as human nature remains at it is, it is absurd to expect the owner of cattle to bear the loss resulting from the ruthless destruction of every tubercular cow he may own, and no half way measures ought be considered. In the last analysis it is the public which pays the bill for lowered public health from whatever cause, and here as in so many other places in life the "first loss is the best loss." The state should organize a proper commission to subject to the tuberculin test all milch and beef cattle within its borders. Every animal which reacts to this test ought be fairly valued and paid for by the state and destroyed. The expense might be heavy in the first years of such work, but it needs no prophetic vision to see that it would grow progressively less, and if the bringing in of tubercular cattle is at the same time forbidden for any purpose, the disease can be totally eradicated and this would mean one large source of human tuberculosis less. The experience of the State of Pennsylvania where a plan similar to the one outlined above has been carried on for years bears out the practicability of the entire plan. In his article on "The Influence of Bovine Tuberculosis on Human Health." M. P. Ravenell, Bacteriologist of the State Live Stock Sanitary Board of Pennsylvania, etc., published in the Medical News of May 7th, states in concluding an able and pointed article on the above subject, "At the present time the weight of the available evidence is in favor of the view that the chief source of infection in children as well as in adults is the human tubercle bacillus, and that the portal of entry is the respiratory tract. It has however been proven conclusively that the bovine tubercle bacillus is responsible for a certain proportion of the deaths from tuberculosis in children and there is strong evidence at hand to show that the number of children infected from bovine sources is quite large. Whether the number be large or small it is none the less our duty to guard against the use of milk from tuberculous cattle as food."

A notable series of addresses on the subject of tuberculosis in general has been delivered before the Phipps Institute of Philadelphia and a very important address on "Communities without Health Departments in the Crusade against Tuberculosis" by Dr. Lawrence F. Flick the director of the Phipps Institute is published in the *New York Medical Journal* and *Philadelphia Medical Journal* of June 11, 1904. The word crusade in the title seems admirably selected, as the individual members of the medical profession must be the first crusaders in this the most vital movement of the age. To overcome the apathy and indifference of the public in the first place and to unlearn or get rid of fixer erroneous ideas in the profession itself will require all the fanatical zeal and indomitable perseverance of the old crusaders. That the public is not better advised on the subject of the practical non-heredity of tuberculosis—of its curability in its early stages—and of the means by which it is conveyed and the best means for its eradication is, I am sure, largely due to the fact that these very ideas have failed to strike proper root in the minds of the great masses of medical men, and the inspiration to start any sort of crusade has failed because of these great defects in medical education and training. Yet Dr. Flick, as so many others before him and notably Dr. Trudeau, says in the address referred to "The curability of tuberculosis is well established. Skepticism upon the subject must go down before ocular demonstration. Persons cured of tuberculosis are no longer curiosities. They are to be found every where and even can be seen in bunches nowadays in gatherings of many persons. Before long every community will have its fraternity of cured "lungers." A stronger statement still follows the one above quoted. "In the early stages of tuberculosis all cases recover under proper treatment. This treatment is so simple that it ought to be within the reach of everyone. That it is not, is because the truth is not recognised. Men have not yet freed themselves from the shackles of the past. It is hard to unlearn. In most cases tuberculosis still remains undiscovered until death has a mortgage on the victim. The average physician still clings to cough mixtures and closed rooms and in doing so abets the disease rather than the patient." It has often seemed unfortunate to me that tuberculosis and especially the pulmonary variety was not and is not called tubercular fever. Were the fact that this process is a febrile process more thoroughly impressed on the professional as well

as the lay mind many of the mistakes made in connection with its handling would not obtain. In what other fever or febrile process is exercise advised—and excessive exercise at that! There is unfortunately no doubt that many cases of tuberculosis have been exercised and medicated to death—none cured by such means. Another important fact is well stated by Dr. Flick, and it bears on the question of climate. To so many the first idea which occurs after the diagnosis of tuberculosis is made is that the patient must seek some other climate, and hence patients are indiscriminately sent east, west or south or any which way so that they leave home. This involves the fundamental error that a certain climate or altitude is an essential part of the treatment of tuberculosis. Dr. Flick says "Tuberculosis can be cured in any climate. All that is necessary is life in the open air, proper food, well regulated and carefully disciplined conduct and in more advanced cases properly directed rest and exercise. People who can command these things in their homes can be cured in their homes. People who cannot command them should be treated in sanatoria. Most people can be better treated in Sanatoria than in their homes." The lessons to be drawn from these and many similar statements by others with large experience in the treatment of this disease are not difficult to discover. Early diagnosis is the first requisite and perfect honesty to the patient stands alongside of it. In no other condition which threatens life is it so imperative for the patient to be told the whole truth. To call the early cough of tuberculosis a "stomach cough" and to treat the whole condition as dyspepsia or malaria or call it such, is scarcely short of criminal. While an occasional case may occur which will tax the utmost resources of the most experienced observer, such cases are very rare. Careful and comparative study of the chest conditions, with careful thermometric observations will not leave many cases in doubt, when the examiner brings a trained ear to the aid of a generally trained brain. I may add here that I do not think the unaided ear alone competent to recognize the slight changes which it is essential to recognize if the diagnosis is to be made early. The expert use of some form of stethoscope is essential and this knowledge may be easily acquired by the daily use of the instrument. I have not mentioned the discovery of the bacilli in the sputa. The diagnosis ought to be made before bacilli are present in the sputa—in fact before there is a real tuber-

cular sputum to examine. But if there be expectoration in any case where the suspicion of tuberculosis may be entertained no careful observer will omit this important step. In those cases where positive diagnosis is impossible, the patient had far better be given the benefit of the doubt and be kept under close observation for sufficient time to either give the disease a chance to get well or the condition causing the symptoms to become clear.

The address of Prof. Maragliano of Genoa, on the "Specific Theraphy of Tuberculosis and Vaccination against the Disease" published in the Medical News of April 2, 1904, represents possibly the most advanced studies in clinical tuberculosis of man which have been made, and it is noteworthy among the other noteworthy addresses which have been made before the Henry Phipps Institute of Philadelphia. It is all but impossible to do the essay justice within the limits at our disposal but it is due this investigator to say that while he has carried out many researches on the lower animals, including not only guinea pigs and rabbits, but the dog, horse, cow, etc., he has never forgotten that man himself is not a proper animal for experimentation or to be used for research purposes and that one must be careful to remember that we cannot always infer that what is true in the lower animal is necessarily true in man. After determining in what appears to be a very exact manner the various immunity, strengths of the sera of animals and also man by the use of methods which have full warrant for their use, he has shown that by safe methods, it is possible to raise the natural immunity of all the experimental animals and of man to a point many times above the strength at which he started. In the main this has been done by the use of bacterial proteids or other products, like the pulp of the tubercle bacilli, never by the living organisms themselves, and the astonishing statement is made that there is a progressive increase in the defensive bodies of his subjects for sometime after the active immunization has ceased. On the basis of these researches some startling suggestions are made. Thus finding as Behring has since found that milk of an immune cow contains these defensive substances and that it is possible to produce immunity through the digestive tract by feeding these defensive bodies he says, "Since milk, the blood serum, the blood and probably also the flesh of immune animals can furnish the human organism with elements of resistance against tuberculosis why should not

they be used as food and furnish along with the normal nutritive material immunizing material? "Why instead of ordinary milk, should we not use the milk of an immune cow? Why instead of ordinary meat should we not eat the flesh of immune animals? On these points scientific investigations are already sufficiently advanced to be of benefit to humanity. Not the the least important suggestion in this very suggestive address is the advocacy of a modified Jennerian vaccination against tuberculosis. Reasoning again from his results in the immunizing of the lower animals he says, "I have lately studied a method for man that is very promising and easy of attainment. I was led to this by what I had observed in my studies of the efficacy of the dead bodies of the bacilli in the production of immunity; and I took as a keynote this fundamental principle; *Create a peripheral focus of tuberculosis inflammation without living tubercle bacilli and bring about by this means the active production of defensive materials...In this way a true vaccination may be practiced.*

The results of this method of vaccination which consists in introducing a very small amount of the vaccine material just under the superficial skin of the arm are illustrated by the report of a case of a child which had been subjected to it. The child's blood on March 1, 1903 had an agglutinating power of 1 to 10. The vaccination gives rise to a slight febrile process but the increase in the agglutinating power of the blood goes steadily upwards. "On April 10th it attained a strength of 1 to 20, June 15th of 1 to 25, July 20th of 1 to 60 and October 15th of 1 to 100." Here we are brought fact to face with a prophylactic measure whose possibilities for good to the human race are as great if not greater than Jenner's famous discovery. It is such studies as these which give us an inkling of the possibilities of further good from modern medical research, which demonstrate the wisdom of the great endowments which have been and are being made to further study the biology as well as the pathology of these great enemies of man, and which further are the answer to the antivivisectionists and other faddists who would in any way impede this beneficent work. In closing this remarkable address Maragliano makes an ill-concealed plea which may well be pondered by the medical profession as well as the laity for it is only by the hearty and intelligent co-operation of both that the great plague of the white race will be banished from the homes

of man. He says "Here in your great country in which there is so much initiative, here ought to be born a great movement for the practical application to normal daily life of all the scientific truths which we now possess for training the organism to struggle against tuberculosis." And we may well add here in this great state it is high time to begin this struggle for the sake of the healthy as well as of the afflicted ones in our midst.

THE MEDICAL TREATMENT OF NEURALGIA AND MYALGIA.

In two patients, Ernst Meyer was able, by the administration of hydrochinon, to relieve pain that yielded to nothing else, even morphine giving transitory relief only. He began with 1 gm. and gradually increased to 4 gm. daily. The drug was taken just before going to bed. Meyer often observed profuse perspiration upon the neuralgic extremity after ingestion of the drug, and once he noted increased frequency of the pulse and vertigo. —(Berliner Klin. Woch., 1904, No. 6.)

COUNTY SOCIETIES.

Secretaries of county societies are requested to furnish for this column, and without further notice, all county society news of interest, such as the date and place of the monthly meeting, notices of death and marriage, epidemic disease, and, in fact, everything which might be of interest to brother practitioners in the State.

Scottville, Ky., May 30, 1904.

The *Allen County Medical Society* met in regular session at 1 p. m. on the 28th of May, 1904. The meeting was called to order by the Vice-President, Dr. W. E. Meredith. A very interesting paper was read on typhoid fever by Dr. J. B. House, which was discussed in a very interesting way by Dr. J. E. Pace of Gainsville, Dr. H. M. Meredith of Petroleum and others. Steps were initiated that hoped to result in the raising and regulating the fees in obstetrical practice in Allen County, which was heartily indorsed by all members present. Dr. J. E. Pace and Dr. C. W. Holland were received into our Society.

The physicians of the County seem to be taking more interest in the County Society than they have been in the past. We hope in the near future to be able to report a number one society in this county.

A. L. WAGONER,
Secretary.

The regular meeting of the *Ballard County Medical Society* was held in the bank building at LaCenter, Ky., on June 14, 1904. The Society was called to order by the president, Dr. J. W. Meshew. After the business session some interesting papers were read. We are sorry to say quite a number of our essayists were absent.

After the program was finished the report of clinical cases was taken up and quite a number of interesting reports were made.

The Society adjourned at 4 o'clock to meet at Lovelaceville the second Tuesday in September, 1904.

The *Daviess County Medical Society* met in regular quarterly meeting at Whitesville on June 21st, 1904. The President, Dr. J. P. Heavrin, was too sick to be present; the Vice-President, Dr. M. A. McDonald, presided. Dr. McDonald on taking the chair welcomed the society to Whitesville in a very felicitous speech. A response was made by Dr. J. W. Ellis. After several interesting reports of cases had been discussed, Dr. A. McKenney read a paper on the treatment of typhoid fever, which was discussed by the members generally.

At 12:30 p. m. the society adjourned to an oak grove hard by where the ladies had prepared a bountiful spread of good things. This too was discussed by all present.

At the afternoon session our delegate, Dr. D. M. Griffith, made an interesting report of the Lexington meeting. D. G. W. Dawson, of Stanley, was admitted to membership, and Dr. J. S. Knox, of Whitesville, made application.

Dr. Ed. Barr read a paper on "Puerperal Septicaemia," which was discussed by several of the members.

Dr. S. S. Watkins read a paper on "Internal Hemorrhage," and an interesting discussion followed.

J. J. RODMAN, Sec'y.

The *Franklin County Medical Society* met in regular session in the office of Dr. A. V. Williams, the first Saturday in May, 1904, at 3 p. m.

The essay was a paper on Summer Diarrhoea, by Dr. Emmett Allen, a recent graduate of Louisville. His paper evidenced original thought and though the young gentleman lacked experience personally, yet it showed a thorough and up-to-date knowledge of his subject from a theoretical standpoint, and

marks him as being timber of which to make a *doctor*. The paper was discussed at length by several members present, and much interest was manifested on the subject. Clinical cases were then called for and a resume of the past month of prevailing diseases in the county was had, in which there was great interest.

Dr. E. E. Hume was chosen delegate to the State meeting in Lexington, with Dr. J. R. Ely, alternate. Dr. J. P. Stewart, of the "*Stewart Home*," for training children of backward mental development, a member of this society, gave a very interesting description of the Home and the work he is accomplishing. He has ample accommodations for one hundred pupils, and now numbers over fifty, with a rapidly increasing clientage, among whom are representatives from almost every State and territory in the United States, Mexico and Alaska. He only takes high grade patients as pupils, excluding cretins, both spontaneous and sporadic, demented, and unclaimable idiots. He is doing a grand work, is most liberally patronized, and, of about twenty such institutions in the United States, ranks second in both size and equipment, and first in results. The Home occupies the site of the old Kentucky Military Institute, whose buildings have been completely remodelled, with hot and cold water in every department, lighted by electricity and heated by steam. The situation is a natural elevation, one thousand feet above the level of the sea, and in the midst of the Bluegrass section of Kentucky, Farmdale, his post office, being six miles from Frankfort.

Dr. J. W. Hill was admitted to membership, after which the society adjourned to meet next on the first Saturday in June, at the same time and place.

U. V. WILLIAMS,
Secretary.

The *Hart County Medical Society* met in Munfordville, April 5th, 1904.

Those present were: Drs. C. J. Walton, P. C. Sutphin, W. W. Bowling, T. H. Garvin, A. C. Baldock, Ben L. Bruner, H. C. Bruner and J. J. Adams.

Dr. P. C. Sutphin read a very interesting paper entitled "A Talk About Doctors." Other subjects of interest were discussed and by request Dr. Baldock read a letter from one of our magistrates and his reply to the same which is self explanatory.

This state of affairs has been brought about by cheap doctors contracting with the magistrates of our county to do all the pauper

practice including medicines in certain magisterial districts for less than the actual cost of medicines necessary to treat such cases should they do their duty towards them and not depend on the rest of the physicians in the territory to do three-fourths of the indigent practice, which they really do and get nothing for it, as the magistrate wants Dr. Baldock to do.

J. J. ADAMS.

The *Marshall County Medical Society* met in Benton, June 8, 1904, with the following physicians present: John A. Jones, president; E. G. Thomas, W. S. Stone, B. F. Hall, H. N. Robertson, A. M. Jones, L. E. Jones, A. J. Bean, E. C. Howard, T. E. Russell, T. C. Coleman, and V. A. Stilley.

Dr. B. T. Hall read a most interesting paper on "Symptomatic Treatment," which was freely discussed by all members present.

The next meeting of the Society will be held the second Wednesday in September, 1904.

V. A. STILLEY,
Secretary.

The *Muhlenberg County Society* met at Central City, Ky., May 11th, 1904, 17 members being present.

Normal Labor was the topic for the meeting and the paper was received with much interest by the Society and was freely discussed by all members present. T. G. Turner, M. D., and Clarence Woodburn, M. D., were appointed to prepare papers for the next meeting at Drakesboro, Ky., June 8th, 1904. Enclosed you will find \$4.00, State dues for E. M. Bewley, M. D., and J. S. Tatum, M. D.

C. E. O'BRYAN,
Secretary.

The *Eighteenth Semi-Annual Session of the Kentucky Valley Medical Association*, held at Torrent, Ky., June 16-17, 1904, was one of the most interesting and successful meetings in the history of the society. A good number of doctors were present from nearly all parts of the district. The meeting was called to order by Dr. C. G. Stephenson, the President. The Association was welcomed to Torrent by Dr. J. H. Stamper, of Campton, in a very elegant and earnest manner. Response was made by Dr. I. A. Shirley. The semi-annual address of the President, C. G. Stephenson, was next in order; this was one of the finest oratorical and up-to-date addresses the Association has

listened to for some time. The Association then adjourned for dinner.

AFTERNOON SESSION.

The afternoon session was taken up as follows: Paper on "Rheumatism," by Dr. J. P. Boggs, of Jackson.

"Diabetes Mellitus," by Dr. G. Combs, of Winchester.

Report of case of Gunshot Wound, Dr. J. H. Evans, of Beattyville.

"Alkiloidal Medication," by Dr. B. Littlepage, of Clay City.

These papers were discussed by all the doctors present.

NIGHT SESSION.

Most of this session was devoted to social features; only one paper was read, on "The Modern Treatment of Stomach Trouble," by Dr. H. H. Roberts, of Lexington, Ky. He illustrated his paper by apparatus and X-ray photographs. This was a very interesting part of the program. This was followed by addresses:

1. "Relation of the Ministry to Medicine," Rev. I. A. Francis, of Winchester.
2. "History of Medicine for 6,000 Years," Dr. Bogue of Cincinnati.
3. "Future of the K. V. M. A.," Dr. C. G. Stephenson, Becknerville.
4. "Specialist in Medicine," Dr. I. A. Shirley, Winchester.

After this the ladies present served refreshments to the crowd which were enjoyed very much by all.

JUNE 17TH.—MORNING SESSION.

The meeting was called to order at 9 o'clock, by the President and the first thing to come before the society was the next place of meeting. Irvine and Jackson were named for the next place of meeting. A vote was taken and Irvine selected, the meeting to be held some time in October, the date to be fixed later. A vote of thanks was extended to the ladies and druggists for helping to make the Torrent meeting a success.

Dr. I. A. Shirley offered the following resolution which was unanimously adopted:

Inasmuch as this society has learned with much regret that one of its beloved members, Dr. B. D. Cox, of Wolfe county, one of the founders and most earnest and devoted members, has decided to remove from our midst and State; be it Resolved, that we, his co-laborers, friends and brethren, greatly deplore his departure from amongst us; and further, that we recommend him to the care and com-

panionship of any reputable body of medical men wherever his lot may be cast, as in every way worthy of their confidence and esteem, and that the best wishes of the Kentucky Valley Medical Association accompany him wherever he may go.

Dr. M. S. Brown, of Winchester, then read a very interesting paper on "Some Conclusions Relating to Appendicitis, Drawn from Observation." This was followed by Dr. L. Treadway, of Heildelburg, who read a paper on "Measles." Dr. C. D. Mansfield, of Stanton, then read a very good paper on "Remittent Fever." Dr. F. Lapsley, of Paris, read a paper on "Typhoid Fever As It Exists Today."

AFTERNOON SESSION.

The last paper to come before the meeting was one on "Broncho Pneumonia Followed by Purpura Hemorrhagica;" this paper was read by Dr. W. H. Forsythe, of Lexington.

On motion a committee of three was appointed by the Chair to arrange a program for the next meeting, the committee named being Drs. W. B. McClure, Jas. P. Boggs and B. Littlepage. On motion it was decided to elect officers on the first day of the Irvine meeting at 5 o'clock in the afternoon. Adjournment.

BUCKNER LITTLEPAGE, Sec'y.

VALUE OF LUMBAR PUNCTURE IN MENINGITIS.

Wertheimer believes that Quincke's method of lumbar puncture affords the means of offering a better prognosis in many cases of meningitis in children, especially in those instances in which this disease follows a pneumonia or acute infectious process, and in which the meningitis may with considerable certainty be considered of the serious type and free from bacteria. He claims that the therapeutic value is also considerable and believes that partial evacuation of the cerebrospinal canal should not be delayed until the test puncture has shown the presence of a high intracranial pressure. Rather it should be done as soon as the general symptoms, particularly the condition of the eyes, point to an increased cerebral pressure, and then the puncturing may be kept up until the pressure disappears. The author reports a case in which a meningitis followed a pneumonia, in which 560 c. c. of fluid were removed from the spinal canal at intervals of several days. The fluid was proved free from bacteria. The symptoms subsided and the child made a good recovery.

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PROSTATIC ENLARGEMENT AND
PROSTATECTOMY.*

BY AUGUST SCHACHNER, M. D.

Practically speaking our real knowledge of prostatic enlargement dates from the publication of the labors of Ciechanowski.

Prior to that time the pathology of this condition was in the main both clouded and incorrect. Since that time, our ideas have undergone such changes as to make the re-arrangement of prostatic nomenclature desirable.

Being unable in the allotted time and space to cover this subject in its entirety, we will confine ourselves to some of its most important and practical phases. Although many points bearing upon this subject are still unsettled, the investigations have demonstrated two questions that perhaps stand out more prominently than all others. The one is that the prostatic enlargement is not a hypertrophy at all. In the other, we recognize that while the obstruction to the outflow of urine is a factor in the production of the complex condition referred to as a Prostatism. The urinary obstruction is only a partial causative factor; the other and equal important element being a disturbance in the circulation in the bladder and the resulting condition dependent upon these nutritional disturbances.

Bryson has presented the conditions in an unusually clear and cogent manner when he says "in stricture we have an example of urinary obstruction, pure and simple, the effects of which upon the bladder, falling entirely upon the muscular coat, determine hypertrophy in its highest degree and purest form. Until the advent of inflammation there are no changes in the mucous lining, or in the circulation, other than come of the thickening of the middle coat with lessening in capacity: i. e. in distensibility.

In prostatomegaly there is also a urinary obstruction, to which, however, must be added a circulatory obstruction, occurring in the earlier stages, altering the picture and giving greater gravity to the bladder lesions; for, while the over-growth is encroaching upon the urethral lumen, the swelling mass presses upward and outward about the bladder neck, squeezing the valveless veins of the vesicoprostatic plexus against the fibrous envelope, obstructing the venous drainage of the bladder and determining a venous hyperaemia in its

walls which can hardly fail to produce trophic results; so that, in prostatomegaly, we have both a urinary and a circulatory obstruction.

Sufficient importance has not, it appears, been attached to this venous obstruction and its effects upon the nutrition of the bladder wall in accounting for the symptomatology and pathology of the bladder changes in prostatitis. It constitutes one of the chief factors in the evolution of the condition known by the collective term prostatism.

In simple urinary obstruction we observe, long before the advent of inflammatory changes, simple, uniform hypertrophy of the middle coat with, in the earlier stages, a corresponding reduction of distensibility. For the most part, trabeculation and the tendency to sacculation are absent. When we have occasion to do epicystotomy in these cases, even in old men without enlarged prostates, we observe, on exposing the anterior vesical wall, no unusual vericositis. Symptomatically, nocturnal frequency is not noticeable while exercise is apt to increase the latter. Vesicalatony and residual urine are rare and occur only in the later stages.

In prostatomegaly, trabeculation, sacculation, atony, distention and residual urine are, among the observed conditions, so common as to constitute the chief foundation for diagnosis; while enormous dilatation of the vesical plexus and its afferent veins is so prominent as to elicit mention by the anatomists."

"Furthermore, removal of the obstacle to urination in stricture is promptly followed by disappearance of the hypertrophy of the middle coat, which is its only pathological consequence; while removal of the urinary obstruction in prostatitis by catheterization is followed by only a partial involution of the more profound and complex bladder changes which have been wrought."

Crandon describes the role which urethral obstruction plays in the senile bladder as follows: "In the development of prostatism and of the vesical pouch we have seen that the first element, and the one which may alone be sufficient, is atrophy of the bladder muscle and replacement of the muscle by fibrous tissue. Such a bladder is less elastic than the unimpaired bladder; it tends more frequently to empty itself and contracture, the usual role of new connective tissues takes place. Grossly, fibrous bands intersect and form sharp, submucous ridges. This more or less in-elastic sac now no longer tends to maintain its natural ovoid form, and weighed with urine by force

*Read before the Kentucky State Medical Association, Lexington, Ky., May 19, 1904.

of posture and gravity, it falls toward the rectum and perineum. The orifice of the bladder, the beginning of the prostatic urethra, situated above the isthmus of the prostate at the apex of the trigonum, is fixed. The prostate is held firmly in relation to the pubes by pubo-prostatic or anterior ligaments of the bladder. At this point, slightly posterior to the isthmus, in the plane of the posterior urethral sphincter, there forms an official lip, behind which falls away the pouch."

According to Crandon, the enlargement occurs most frequently in the lateral lobes, then in the lateral and middle lobe, then middle lobe alone and lastly one lateral lobe. Enlargement of anterior commissure is exceedingly rare, because the glands in this position of the prostate are too few and too small.

In bi-lateral enlargement "the urethra is increased in length and its cross section transformed from a tri-angular to a vertical slit." The sphincter remains normal while the urethral floor anterior to it is depressed. According to Albarran the middle lobe develops from a few isolated prostatic acini situated behind the ejaculatory ducts. These have been called by Albarran the pre-spermatic group.

The interest in the development of the middle lobe depend upon the influence which this lobe exerts upon the sphincter and urinary incontinence. For a time, different views existed but as Crandon has pointed out it is now agreed that the sphincter posteriorly disappears either being pressed upon by the new growth above it, or suffering infiltration by the growth: "This middle lobe may act as a cause, therefore, of either retention or incontinence; retention, if the growth fit like a ball-valve exactly into the orifice, incontinence, if it does not fit the orifice, and at the same time does continually stretch and so destroy the tonus of the sphincter."

The one-sided enlargement is relatively uncommon and develops in the direction of least resistance, which is first, towards the periphery and finally towards the urethra which passage it narrows, lengthens and later deviates.

"In enlarged prostate, the essential change is a passive dilatation of the prostatic glands and ducts induced by the gradual accumulation in them of retained secretion, degenerated, cast-off epithelium, and leucocytes.

The so-called hypertrophy of the prostate, as well as certain forms of prostatic atrophy, are related histogenetically and have a common cause. The two processes do not differ qualitatively but only in the distribution, in-

tensity and localization of otherwise analogous changes.

The common starting point of the enlargement and certain forms of atrophy is to be sought in the productive connective tissue processes which occur in the stroma.

If the stroma changes are located in the central prostate near the principal exits, the lumina are closed, secretion collects and peripheral dilatation results. This dilatation is the more rapid and reaches a higher degree the more numerous and the nearer to the exits of the principal tubules the obstruction occurs, and also the higher the degree of the simultaneous intra-glandular pathological processes.

The enlargement of the prostate is almost exclusively due to dilatation of glands. The new formed connective tissue is relatively unimportant, and the active participation of muscle tissue in enlarged prostate in the way of true myoma (great majority of cases) is unproved and doubtful.

If the stroma changes take place principally in the periphery and near the blind ends of the tubules, then there is atrophy of the tubules, shrinking of the connective tissue in the stroma, and atrophy of the entire prostate. This is quicker and more intense if there is no endo-glandular pathological process.

According to the balance of these two processes, the prostate may be of a normal weight, increased or diminished.

Crandon in his conclusions reiterates:

(1) The underlying cause of the usual form of prostatic enlargement and of certain forms of prostatic atrophy is a slow formation of new connective tissue due to infection or to infection aggravating a senile degenerative process.

(2) The gonococcus is probably most often the specific infection because (a) of its great frequency; (b) other inflammatory causes are not common in the parts in question; (c) a great similarity exists between the histology of gonorrhoeal processes and those seen in these senile prostates.

(3) Neoplasms, fibromyomata and adenoma occur, but may be called rare."

Although the operation for the relief of prostatic enlargement is unquestionably prostatectomy, we are unable to believe that there are not some cases that by reason of age or some other equally potent factor are not unsuitable for prostatectomy, yet still are quite desirable candidates for prostatomy. These, we know, represent an exceed-

ingly small per cent. As our experience grows, we learn to successfully operate upon cases that we formerly considered entirely beyond the realm of prostatectomy. Since prostatectomy is a comparatively new operation, it is but natural that many questions of detail should await their final confirmation.

The first question that presented itself in the development of prostatic surgery, was that of deciding between the perineal and the suprapubic routes. This question like that of the selection of one anaesthetic to the exclusion of any other, or the selection of the vaginal method in pelvic work to the exclusion of the abdominal route, can only be settled at each individual operation.

Rationalism consists in recognizing the merits of each particular case and suiting the action to the condition.

As a general proposition, however, there are very few cases that can not be attacked better and easier through the perineal than the suprapubic route. And as our experience grows, cases that formerly were considered unsuitable for the perineal are now successfully dealt with through this route. As in the question of prostatectomy versus prostatomy there will always be a limited number, *very* limited, it is true, of cases that can be dealt with better by the suprapubic method.

This would include cases with enormous intravesicle growths and also certain cases of calculi particularly those in which the calculus is not free in the vesical cavity or is of unusual proportions.

It is hardly necessary to enumerate the advantages of the perineal over the suprapubic methods which are, easier access, less hemorrhage, better drainage, less loss of time, earlier removal from bed and shorter convalescence, not to mention the more chances for success, which these advantages represent, or the lessening of occurrence of fistula and hernia, which are not likely or at all possible by the perineal route.

Interest has been revived in the suprapubic route by the publication of two recent papers by Moynihan and Wiener, dealing with the total removal of the gland by the suprapubic operation.

These papers are instructive in that they illustrate the fact, that the suprapubic route is after all not as difficult and indirect as we formerly supposed. Apart from this, however, it is by no means likely that they could turn the tendency from the perineal to the suprapubic route. Wiener's introductory re-

marks are inclined to create rather extravagant expectations, but a study of his recorded cases does not corroborate his representations. He is longer, as a rule, in getting his patients out of bed in the first instance. The ultimate recovery is longer in the second. Besides his hemorrhage, although less than customary in a suprapubic, is no less than the perineal operation. The time consumed about the same. Although the bladder can be drained suprapubically, we know that water will run downhill easier than it will run up. Lastly, the total removal of the gland is neither necessary nor desirable and in his cases there was a constant tendency to the formation of a stricture and obliteration of the urethra. In the perineal operation, the tendency to the obliteration of the urethra has up to this time not been the rule. The question has been raised, whether in the distant future subsequent trouble will not manifest itself in the form of stricture. At present, the grounds upon which the expectation of future trouble in those cases where only a portion of the gland is removed and where the urethra although torn in its floor remains are slim. Trouble can be expected where we practice total removal of the gland together with the entire prostatic urethra.

Another question that elicits almost as much discussion as the selection of the route, is that of the character of the incision employed in the perineal operation. A number have been suggested, such as the median, the inverted "Y," the "V" shape and the crescentic. Practically, it narrows itself to either the median or the inverted "V" shape. The objections to the inverted "Y" are as Young has pointed out. That the stem of the "Y" is unnecessary in that it runs away from the actual field of operation, which is behind the stem and the bulbous portion of the spongy body. The selection between the median and the "V" shaped incision depends partly upon whether we enter the capsule from its urethral surface or its external surface and upon whether we are dealing with a fat subject with thick perineal muscles and abundant perineal fat. There is no doubt, however, that the median is by far the most popular incision, makes the most manageable wound and is best adapted for the removal of the vast majority of the prostatic enlargements. Young has suggested that the objections to any but the median incision, are largely based upon the fact that they are carried through perineal muscles which is a mistake and entirely unnecessary. The objection

to the crescentic incision is that it is unnecessarily large and troublesome in its management.

The enucleation of the gland is both rapidly and easily performed in the vast majority of instances, provided we get fully and fairly within the capsule. Care should be observed to avoid cleavage of the capsule which always leads to embarrassment. Occasionally a gland is met with that will not shell out as is customary and in such cases the removal can only be affected through morcellation and usually with more or less difficulty.

The opinion of the majority of operators is, that a total removal is neither necessary nor desirable. Before removal from the operating table, it is the practice of some surgeons to inject about a liter or more of saline into the mammary region. The bladder should be thoroughly irrigated with a large full stream of hot saline and a good sized drainage tube inserted, packing the cavity and surrounding space with iodoform gauze. A few temporary silk worm sutures will render excellent service in preventing the displacement of the packing and overcoming any tendency to oozing. The drainage tube is allowed to remain from three days to a week. The bladder being irrigated twice daily with a warm Thiersch solution. This antiseptic irrigation is supplemented by the use of urotropin three or four times a day.

In view of the age of these patients and the great importance of perfect drainage, it is desirable to get them into a sitting posture or out of bed, the earliest possible time; usually they can be placed in a semi-recumbent posture in bed at the end of 24 hours and at the end of 48 hours can, as a rule, be lifted out of bed, into a proper chair and left in a sitting posture.

So far the tendency to the occurrence of stricture has not manifested itself in those cases where partial removal was practiced.

The keynote of success in prostatic surgery is to avoid, if possible, making prostatectomy the operation of last resort of waiting until serious kidney lesions have developed and until the patient's vitality is at its lowest ebb. In addition to this, when we do operate, we should do a rapid operation, we should establish perfect drainage and practice the removal of the patient from the bed, changing him from recumbent to a sitting posture as early as possible. The observance of these rules has changed the mortality of prostatectomy from that of a high one to a mortality of practically *nil*, notwithstanding the undesirable

conditions which these patients usually present.

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3. On Removal After Suprapubic by Cystotomy of Prostate, etc., *Annals Surgery*, Vol. XXXIX.
4. Suprapubic Prostatectomy, Joseph Wiener, M. D., *Jour. Am. Med. Ass.*, Vol. XLII.
5. Conservative Perineal Prostatectomy, Hugh H. Young, M. D., *Jour. Am. Med. Ass.*, Vol. XLI.

DISCUSSION.

Irvin Abell, Louisville: Text-books on this subject usually state that there are three lobes present; the third one, however, I have found only in men of middle or advanced age, consequently have come to look upon it as an evidence of prostatic enlargement. I can not agree with the essayist in the endorsement which he gives to the views of Ciechanowski; it does not seem logical to me that if, as he claims, the enlargement is due to inflammatory occlusion of the ducts, this would always appear at a certain time of life, as the enlargement invariably does; nor would these enlargements be as easily removed or enucleated as they ordinarily are; again there is an absence of inflammatory history in a very large percentage of cases. I adhere to the view that the majority of cases come under the type of adenomatous growths, granting that some cases may originate in the manner described by the essayist and these cases are the ones that give us trouble in removing them, finding that they are firmer and denser, do not enucleate easily but require the use of the Rongeur forceps to remove them by morcellation.

A point of great importance to be determined is, which class of cases are suited to the operation and which are not; in my opinion only those cases requiring the continual use of the catheter, those having frequent attacks of retention, those with irritable urethrae prohibiting local treatment, those with an ounce or more of residual urine, with or without infection are to be subjected to operation; while cases showing evidence of renal involvement, weakness and debility from any cause, cases without residual urine and without infection

and which can be made comfortable with palliative treatment are to be let alone.

I agree with the essayist that the perineal route is the best suited for the majority of cases. The results have been very encouraging and while not perfect, they more nearly approach perfection than any method heretofore employed.

* * *

Dr. W. R. Blue, Louisville: I enjoyed Dr. Schachner's paper very much, but like Dr. Abell, I cannot agree with all the authorities quoted. If I did, the work which I have done for so long a time, relying upon the microscope as a diagnostic agent, would be very seriously shaken.

In regard to prostatectomy, when you take into consideration that only about 15 per cent of these cases are suffering from the disease, there are very few cases where such radical procedure is indicated.

Where the patient is scrupulously clean in relieving himself, and is perfectly instructed by the surgeon, even though he pass his water with the aid of the catheter, men who have retention can get along for years.

I have a case like this, and, if he does occasionally have a little flurry, it is easily corrected by the use of boric acid.

The doctor has spoken of the Bottini operation: the results of this operation so far have been 78 per cent of cures. It is an operation that is never followed by hemorrhage or shock.

* * *

Dr. Schachner, closing: I have not much to add excepting that I am sorry that the time at my disposal was so limited.

Certainly Ciechanowski has the very best authorities on both sides of the Atlantic. Men who have discouraged this claim have become converts, the more they have investigated. Of course there are many gaps to be filled in yet. It is not a completed story.

I do not think that Dr. Abell made a very strong case when he mentioned the time. I do not think that incompatible with these theories. We have to deal with a process that extends over many years, and there are specific changes.

Dr. M. H. Yeaman has been named as superintendent of the Lakeland Asylum to succeed Dr. J. G. Furnish. Dr. J. W. Stephens, of the Western Asylum, is appointed first assistant physician and Dr. W. E. Gardner, of Hardin county, second assistant physician. Appointments are effective August 1st.

THE DIAGNOSIS, PROGNOSIS AND TREATMENT OF CHRONIC NON-SUPPURATIVE MIDDLE-EAR DISEASE.*

BY J. MORRISON RAY, M. D.
Louisville, Ky.

An extended study of the changes taking place in the middle-ear in chronic non suppurative deafness has led to a more accurate knowledge of the pathological conditions responsible for this most obstinate disease: thus its treatment and prognosis have been placed upon a more scientific and exact basis. Much yet remains to be learned in regard to the etiological factors underlying these changes and I have thought a review of the subject up to date might help to refresh our memories in regard to much that has been overlooked. To many, a paper on this subject upon the program of any society is generally passed over. With this knowledge confronting me I have assumed to take up the subject and see if we cannot bring together clinical facts and observations that may be of value to some who daily are compelled to pass upon the treatment and prognosis in these cases.

In the wide domain of medicine there are few diseases which while not being fatal cause so much annoyance, discomfort and unhappiness. Within recent years when the brilliant work of the aural surgeon in the management of the serious complications of pus in the temporal bone is well known to all, it seems justifiable that we pause a moment and consider the less showy, but at the same time, more plentiful class of cases usually diagnosed as aural catarrh.

Much undeserved reflection has been cast upon the science of otology because of our inability to cure or alleviate the distressing symptoms in this disease, and as a result, quacks and practitioners of questionable repute, by their encouragement reap a rich harvest from the nervous females who make up the larger percentage of its incurables.

It is impossible for me to more than sketch an outline of much of our knowledge of the disease. The recent investigations of Siebenman and others, have however opened up new lines of investigation that may yet yield results.

At least 30 per cent. of all cases of ear disease applying for treatment come within the scope of the conditions under discussion and its development is so insidious that often

*Read before Kentucky State Medical Association, Lexington, Ky., May 18, 1904.

changes that cannot be influenced by treatment have occurred before they are seen by the physician.

Roosa has stated, and the observation has been verified by others, that under normal conditions the human ear possesses a surplus amount of hearing power and much of this may be lost without the patient being aware of the defect in his hearing, and thus diseased conditions may exist for a long time before he is aware of the defect and therefore does not consult a physician until organic changes of such a character have occurred as will preclude their complete eradication.

The diagnosis of chronic non-suppurative middle-ear deafness is usually an easy task. A progressive deafness without pain accompanied by annoying tinnitus: the absence of an accumulation of cerumen or other obstruction in the external canal, without history of a suppurative ear, are generally all sufficient, because deafness due to changes in the auditory perceptive organs is rare and can be quickly excluded by placing a vibrating tuning fork in contact with the bones of the skull. The sound of the fork being heard better by the bone than when held close to the ear and the sound carried by air, positively locates the disease in the middle-ear.

Practitioners of otology have for a long time been aware of the fact that chronic non-suppurative middle-ear diseases presented themselves clinically in two forms, one of which was susceptible of improvement by treatment, the other was absolutely resistant to all kinds of treatment. These were differently named by different investigators. Thus Roosa divided them into catarrhal and proliferous and was of the opinion that they might be merely different stages of a similar process. Dench classified them as hypertrophic and hyperplastic. One of the most pretentious of the systems recently published in the chapter on non-suppurative middle-ear diseases seems to still adhere to the idea that the two forms are but different stages of the same process. Von Troeltsch designated them catarrhal and sclerotic and was of the opinion that both were primarily due to changes in the mucous membrane. Politzer in the fourth edition of his text book considers the two forms of chronic non-suppurative middle-ear disease under separate heads, one he calls chronic catarrhal or adhesive middle-ear disease; the other he designates as oto-sclerosis. Toynbee probably was the first to recognize the changes that take place in the middle-ear in oto-sclero-

sis. He described 136 cases of ankylosis of the stapes and osseous hypertrophy of the inner tympanic wall in his post-mortem work. Later, Katz, Bezold and Siebenman, from post mortem investigations recognized that what had been known as sclerosis of the middle-ear was a distinct disease originating primarily not in the mucous membrane but in the bony walls of the oval and round windows, sooner or later invading the footplate of the stapes or other parts of the ossicular chain producing fixation of the stapes and ankylosis of the ossicles.

Politzer states that in many cases no noticeable variation from the normal could be found in the middle-ear aside from the fixation of the stapes footplate, the mucous membrane being healthy in appearance. But when microscopic investigations were made of decalcified sections, new bony formations were present in the capsule of the labyrinth, which contained large bone spaces and Haversian canals. In other specimens this bone formation seemed to invade the entire inner wall of the middle-ear cavity, the fixation of the base plate of the stapes producing changes similar to those found in other joints in the disease known as "Arthritis Deformans." Bezold claims that it is primarily an ossification starting in the periosteum. Siebenman because of the large size of the bone spaces and the abundance of the Haversian canals designated the disease as a spongification or rarefying osteitis of the capsule of the labyrinth.

The catarrhal cases on the other hand are the result of an extension of an inflammation of the mucous membrane from the nasopharynx and the Eustachian tube producing a thickening and occlusion of the lumen of the tube, interfering with the proper ventilation of the tympanic cavity by preventing the removal of the air contained in the tympanum with sufficient frequency. This leads to a disturbance of the intra-tympanic air pressure, producing a partial vacuum which in turn causes an indrawing of the tympanic membrane, and consequently an interference with its vibrations and with the free mobility of the ossicular chain. Inflammatory processes are thereby excited and adhesive bands are formed which become organized, deafness and annoying tinnitus resulting. These changes, however, are not likely to produce the same high degree of deafness as is the sclerotic form.

Thus you see we have two forms of chronic, progressive non-suppurative deafness, different in their etiology, perfectly distinct in the

pathological changes found, rarely associated with each other, and differing entirely in their prognosis and treatment. The distinctive clinical features of these two forms are therefore of the greatest importance and upon their proper interpretation depends the scientific accuracy of our work.

The differential diagnosis between otitis media catarrhalis chronic and oto-sclerosis can be summed up about as follows:

The catarrhal variety has always a history or evidences of catarrhal changes in the nose or naso-pharynx, such as stenosis, hypertrophy or evidences of relapsing inflammation.

Oto-sclerosis usually presents no evidence or very slight evidences of nasal or naso-pharyngeal disease.

Catarrhal cases give a history of frequent attacks of deafness followed by periods of improvement, then fresh attacks.

Oto-sclerosis is insidious in its development with very little amelioration at any time.

Catarrhal deafness often occurs in early life and without a history of heredity or other cases in the family.

Oto-sclerosis does not start usually until after the twentieth year and often has a distinct history of heredity.

Catarrhal deafness affects both sexes, more often men than women because of their habits and customs.

Oto-sclerosis most often occurs in women and those who are anaemic and is always affected injuriously by pregnancy.

In catarrhal cases inspection shows changes in drum-head, opacities, indrawings, fixations of malleus, obstructions to the Eustachian tube on inflation.

Oto-sclerosis may show normal drum-head and patulent tube. If any changes are present it will show only as an area of redness of the inner wall of the tympanum visible through the drum-head behind the malleus handle.

In catarrhal cases inflation by the catheter always, at least temporarily, improves the hearing and for the time being the tinnitus.

Oto-sclerosis is not influenced by catheterization.

Lastly, the tuning fork assists materially in fixing the diagnosis. It is known of all aural surgeons that when in deafness a tuning fork of the middle register is started to vibrate, and held in contact with the mastoid or cranial bones and the sound is heard louder and longer than when the same sound is carried to the ear through the air, that the deafness is of middle-ear origin. If on the other hand the

air conduction is louder and longer than that by bone the deafness is probably due to disease in the perceptible organs of hearing. A test of the relative length of air and bone conduction is familiarly known as Rinne's experiment.

In chronic middle-ear deafness, with normal drum-head, Rinne's experiment negative, (that is, bone conduction longer than air) air conduction for low tones destroyed and that for high tones still present, the case may be safely diagnosed as one of oto-sclerosis.

This negative result of Rinne's test when the C fork is used is absolute evidence of middle-ear obstruction. If this is not changed when the air is condensed in the external canal, say, by the finger firmly pressed into the meatus, or when the tip of an air bag is fitted in the ear and air condensed in this way (Gelle's test) the presence of stapes ankylosis or other sclerotic changes is positively denoted.

Treatment: Siebenman from his investigations in oto-sclerosis which he designates as a rarefying otitis suggests that phosphorous intelligently given may prove of some value. Politzer has more confidence in the iodides. Since so many cases occur in anaemic and neurasthenic females, general tonic treatment is advisable. The English are inclined to ascribe many of these cases to rheumatism and gout and advise treatment along these lines. Further study may sustain the suggestion that many of these cases have the syphilitic inheritance as a factor and thus mercury may prove of some value. Experience has proven that local treatment through the nose and Eustachian tube instead of being beneficial is often followed by an increase in the deafness and other annoying subjective symptoms. Politzer says that pneumo-massage if carefully and gently used may be of benefit. My experience with this in oto-sclerosis has been uniformly bad. It appears to me that when such cases present themselves, advice with reference to general health, climatic changes and methods of living are of far more advantage to the patient than any thing we can possibly do by direct medication.

In the treatment of the so-called catarrhal cases a different problem presents itself. An increase in the knowledge of rhinological disease by the aural surgeon has been of much value to sufferers from chronic catarrhal deafness. The relationship between chronic deafness and diseases of the naso-pharynx and nose is intimate. Roosa remarked that the next generation would see less of chronic

deafness than the past because of a wide recognition of naso-pharyngeal disease as a factor in the ear disease, and that a prompt removal of adenoids would do more to prevent future deafness than anything else.

We should remember that the auditory apparatus is but a diverticulum of the upper respiratory area, and partakes in many respects of the same histological characteristics. The mucous membrane is a direct extension and is acted upon by physical conditions in a similar manner. The conformation of the ear is such, however, that direct medication of its mucous lining is not always practical. The ear often resents the presence of antiseptics, astringents and absorbents. In fact, I have seen a violent acute process established by injections into the middle-ear of 1 per cent. nitrate of silver solution. As long as the Eustachian tube remains open for the free entrance of air, the middle-ear seems to require very little direct medication. So that our aim must always be to preserve the air equilibrium. This is accomplished by the Politzer air bag and the Eustachian catheter. The former is effective in acute and sub-acute processes, but in chronic changes the catheter must be our main dependence.

Much of the success gained in the use of the catheter depends upon the method employed. Before a catheterization is attempted the nose and naso-pharynx must be thoroughly cleansed by an antiseptic alkaline wash. else the danger of forcing mucus and other foreign particles into the tympanum is great. I believe the inferior meatus should be cocaineized and the instrument introduced into the Eustachian opening by the aid of a rhinoscopic mirror, and by the auscultation tube, the sound entering the tympanic cavity carefully noted. The introduction of sterilized and medicated fluid vaseline has been of more beneficial effect than any other intra-tympanic medication in my experience. Treatment through the external auditory canal by means of massage is the most popular method of recent introduction and has been much over-rated. During a trial of four years I have never seen a case more than temporarily benefited by its use and I am forced to agree with Blake that the too energetic use of pneumo-massage is far more deleterious than beneficial in many cases. The violent to and fro motion produces a stretching of the posterior quadrant of the tympanic membrane that often immediately lessens the acuteness of hearing, the only effect produced being a temporary lessening of the tinnitus.

Mechanical massage applied to the tissue about the ear often produces the same lessening of the tinnitus and is devoid of the danger of overstretching the membrane. The work of Ducloux has called attention anew to the Eustachian bougie and electricity. The method he advocates is by electrolysis applied to a bougie introduced into the tube. The method has not appealed to me and I believe that electricity applied in this way has a caustic effect and the conditions it is intended to ameliorate are exaggerated by its use. Shields says, "I have never known material improvement excited in chronic middle-ear disease either by galvanism or faradism." The whale bone bougie as advocated by Politzer and others may be of value in selected cases but should be cautiously used.

The treatment of the nasal condition often present in ear diseases has become almost a routine with aural surgeons. If it is true as Cryer says that the inferior meatus is the channel through which the larger current of air passes, it stands for reason that this should be kept open, but when ear disease is once established we must admit that the results of nasal surgery have not been curative. Recently I was consulted by a man, age 63 years, suffering from a chronic catarrhal deafness, who had been advised by an eminent aurist to have a small bony ridge on the septum, well up in the middle meatus, removed, with the statement that its removal was necessary if benefit to the ear was to be obtained. In such cases it has not been my experience to see benefit either temporary or permanent result from an operation.

Pritchard states that intra-nasal surgical procedures in the treatment of chronic non-suppurative middle-ear disease should be limited to those cases where the nasal defects are producing substantial stenosis, or such irritation of the mucous membrane as does affect or, if extended, will affect the Eustachian tubes. Therefore in oto-sclerosis operations on the nasal cavities are not only uncalled for but are absolutely useless.

At a recent meeting of the British Medical Association, McBride and Semon challenged the members of the otological section to present a case where treatment directed to the relief of nasal obstruction had permanently relieved chronic deafness. When we reflect upon the number of cases we daily see of nasal polypi and other forms of obstruction to free breathing without ear trouble, that have existed for years, we must admit that interference

with nasal breathing is only one of the many factors at work in bringing about changes in the ear. And that treatment directed at their alleviation should be considered more as a prophylactic than as a curative measure in dealing with this obstinate and distressing malady.

DISCUSSION:

Dr. Dudley S. Reynolds, Louisville: I have made a few notes of some of the conditions properly named non-suppurative middle-ear diseases, some of which are curable:

First, the rheumatic cases (with ankylosis.)

Second, the syphilitic cases (with ankylosis.)

Third, the hyperplastic conditions following variola, and other exanthems, or from excessive smoking (with or without ankylosis.)

Fourth, the hyperplastic, associated with what has been called proliferous rhino-pharyngitis (with or without ankylosis.)

Fifth, the obstructive conditions from various neoplasms in the pharynx, or in the tympanum.

Sixth, the obstructions from osseous malformations, most frequently of the posterior extremity of the inferior turbinate bones.

Seventh, ankylosis of any or all of the articulations of the ossicles.

Eighth, calcification of the membrane which receives the base of the stapes, or spongy degeneration of the whole petrosal process.

Now, as to prognosis, that must be determined by the results of the treatment.

The cases of the first class are cured, or materially benefited by the use of pilocarpine, and the salicylates; in the chronic cases aided by pneumatic massage through the catheter.

In the second class, cases of inherited syphilis have been greatly improved by treatment; acquired conditions are sometimes entirely cured.

Knapp (Arch. 1880) reports a very severe case of deafness, nearly total (according to the classification of the U. S. P. B.) in which ordinary conversation could not be heard at any distance; the case showed great improvement under treatment.

Buck (N. Y. Med. Rec. Oct. 1st, 1887) reports a case of inherited syphilis, deafness was profound, case greatly improved under treatment.

Politzer has used pilocarpin successfully in a chronic syphilitic case (1884).

Turnbull, S. McCuen Smith, Duncanson,

Burnett, Sexton, and many others reported successful cases prior to 1900.

Since then, pneumatic massage has opened the way for everybody, and experimental methods of mechanical manipulation have disclosed conditions that will admit of cure in a greater variety of cases. It is certainly very beneficial in the treatment of those cases which are due to obstruction. Medication in some of these cases, by means of the bougie, carrying the yellow mercurial ointment, has sometimes been attended by very satisfactory results.

The Iodides, Mercury, Pilocarpin, and the Salicylates often accomplish wonderfully beneficial results; and, some sort of constitutional medication will be found necessary in nearly every case.

* * *

Dr. J. A. Stucky, Lexington: I am in accord with the essayist, and would like to mention two methods of treatment referred to which I have discarded.

I do not get good results from the pneumatic massage, and I have put that on the shelf. I do not recall a single case in which I have seen it accomplish anything even when used through the catheter. I may not have used the treatment right, but I have never seen any permanently good results.

I have had good results in the hyperplastic form from the use of Systemic treatment, in conjunction with the vibratory massage with a good stroke, not less than one-fourth of an inch.

During the last six months I have treated several cases that I have had under observation for ten years, and two or three weeks of this treatment had given more relief than anything that I had done for them before.

The patient should be in the recumbent position, and the vibrator used thoroughly.

* * *

Dr. J. F. Reynolds, Mt. Sterling: I have not had any experience with the electric massage, but I have had some experience with the pneumatic massage through the external canal, and have had good results during the first four or five treatments.

I have also had some experience with the pneumatic massage through the Eustachian catheter, and have found it to be worthless.

I believe that catheterization of the Eustachian tube will soon be a thing of the past.

Dr. Ray mentions in his paper the decreased percentage of deafness expected in the future, and a large percentage of this decrease will probably be due to the removal of adenoids.

I think adenoids should be removed early for about 95 per cent. of all cases of deafness in children are due to adenoids.

* * *

Dr. William Cheatham, Louisville: In regard to the vibratory massage referred to by Dr. Stucky, I will state that I have found it to give good results.

I cannot see how we are to get along without the catheter; I not only use the catheter a great deal, but also use the bougie.

* * *

Dr. Ray, closing: I am sorry to have to disagree with my friend, Dr. Reynolds. I think if he will look into the matter that he will find that syphilitic cases of middle ear disease are not all curable.

I admit, of course, that a certain number of cases can be relieved; I admit also that I cannot tell when a case is syphilitic middle ear disease. Simply because it occurs in a person who once had syphilis does not prove it to be syphilitic. There are no pathognomonic changes in the middle-ear that can be said to be syphilitic.

SELF-DISPENSING BY PHYSICIANS, FROM THE PHARMACIST'S STANDPOINT.*

BY ADDISON DIMMITT, LOUISVILLE, KY.

This is a very delicate subject for a pharmacist to handle and I trust my criticisms or suggestions may be received in the spirit which prompts them, a spirit of fairness and justice. The physician may think it is a question that concerns him alone; that it is his privilege and prerogative to act as he deems best, without the advice of any one, especially the pharmacist who, he would at once say, is actuated by selfish motives and naturally takes the negative side of the question.

As a pharmacist, I acknowledge that I may be prejudiced in my opinion of the subject, but I earnestly believe that I can show reasonable grounds for my contention. At all events I feel impelled to say something in behalf of the pharmacist on this subject, which is a menace to our business, and since "good, the more communicated, more abundant grows," if interest is now aroused some benefit may be derived.

Let us first take up the subject from the physician's standpoint. He hears from the traveling representatives of the numerous

pharmaceutical manufacturing concerns that the retail druggist is an irresponsible person, who substitutes on all occasions, charges the doctor's patients exorbitant prices for filling prescriptions, counter-prescribes, is incompetent, and, awful to relate, does not keep in his stock the particular make of pills, tablets and pharmaceuticals sold by this salesman, which in his eyes is a most unpardonable crime. Incidentally, he permits the doctor to buy a line of his incomparable preparations. He then proceeds to call the doctor's attention to the fine points of the business, and shows him what a great advantage he will have over his competitors who write prescriptions. He claims that it will attract many new patients when it is known that he furnishes his own medicine without additional charge. And, further, he suggests to the doctor, "when you dispense yourself, only give a sufficient amount to last a few days, as this will bring the patient back again and means an additional fee." And the interview concludes with the apparently unanswerable argument: "you know, doctor, when you dispense my products, you may be positive you are giving the very best." "Doubtless the pleasure is as great of being cheated as to cheat," for this plausible proposition catches many an unwary doctor, and it is only after he is in the meshes and realizes that he is jeopardizing his good name and professional reputation, as well as the lives of his patients, that he appreciates the gravity of the situation.

Another reason advanced for self-dispensing by physicians is competition among themselves. I have found many doctors and some of them most excellent men, who, on account of their environments, have been forced to dispense their own medicines. Possibly the best illustration of this I can give is to describe the conditions existing in one of our own towns. It is a place of about 3,000 inhabitants, has six or seven physicians and only one drug store, which, as you know, is very unusual for a town of that size. As my business was with both the druggist and the physicians, I very soon found out the cause. The druggist, whom I interviewed, told me that he did not average ten prescriptions a week and most of them were from neighboring towns and that all of the physicians there dispensed their own drugs.

This druggist, by the way, was a very intelligent man, a graduate in pharmacy and no doubt competent to have filled any prescription that may have come to him.

*Read before the Kentucky Pharmaceutical Association at Mammoth Cave, June 22, 1904.

In my rounds among the physicians of the place, I found that with the exception of one, all of them were heartily tired of self-dispensing and would gladly stop the minute a general agreement could be reached. The last man I interviewed was the cause of the trouble and he, like most narrow, self-opinionated men, looked only at one side of the subject. We talked over the subject of self-dispensing thoroughly and he only echoed the well-told tale of the tablet detail man.

While in his office I had an opportunity to take a mental inventory of his stock, which consisted principally of tablets, replacers, a few ointment pots and a half dozen bottles of U. S. P. preparations. Disorder reigned supreme; the shelves and bottles were covered with cobwebs and dirt and as I was looking over his limited stock, I thought if he would even dispense his medicines with a little cleanliness, both he and his patients might approach nearer that state of godliness so much desired.

Another cause sometimes cited as a reason for self-dispensing is competition of the homeopathic physician which, when we consider the character of the medicinal agents used by them, does not appeal to me as a reasonable cause.

Now as to some of the reasons advanced by the physicians for dispensing their own drugs, we will first consider that of substitution by the druggist, which, to my mind, is the only reason advanced by them that bears any earmarks of truth.

As a pharmacist I regret to say that we have in our ranks men who are dishonest and unprincipled enough to substitute, and I agree with the physician that they ought to be prosecuted to the fullest extent of the law, and that their methods should be exposed in their community. I believe the physicians themselves can do more to free our profession from these parasites than any one else, by first assuring themselves that the druggist does substitute, then prohibiting his patients from patronizing such druggists. This duty he owes not only to his patients, but the community in which he lives. By this means he can thoroughly rid himself of such pharmacists, or force them to stop substituting for policy's sake. In this connection I would say that the law in this state against substitution is a most severe one and it is the desire of all honorable pharmacists that it should be enforced to the letter, as the misdeeds of the substitutor reflect on the entire profession.

Another reason advanced by the dispensing

physician as a cause for same is the incompetent druggist. Yes, there are incompetent druggists just as there are incompetent physicians, but I am glad to state that the ratio of incompetent druggists in our state is rapidly decreasing, due to the rigid enforcement of the pharmacy law. During the past five years only 40 per cent out of about five hundred applicants for certificates as pharmacists, were found competent to practice pharmacy, and it is only a question of a few years until every druggist in our state will be found to be thoroughly educated and equipped for his profession. But this excuse for self-dispensing cannot possibly apply in most of our towns and cities, for in them will be found men who are thoroughly educated in the art of compounding and dispensing medicine.

In the cities and towns where self-dispensing is practiced the effect on the druggist is deplorable. Not having the support and patronage of the physician, they naturally do not carry in stock the necessary chemicals and pharmaceuticals that they should, and again, the incentive for keeping abreast with the advancement in pharmacy is taken away from them, and with the professional part of their business gone, they become absolutely merchants, and for self-protection naturally push and recommend the numerous patent and counter remedies, all of which would be avoided if they were working in harmony with the local physicians and the best interests of both would be subserved by abolishing this practice.

Now let us consider some of the disadvantages self-dispensing carries with it. In the first place, I contend that the average physician knows little or nothing of the art of pharmacy. Where is he taught to prepare, compound and dispense medicine? Not at the Medical College from which he graduated, for none, as I understand it, attempt to teach practical pharmacy. This fact is borne out by every Medical College in this country. The study of materia medica and chemistry in schools of medicine is confined to the therapeutic actions of drugs almost entirely, not to their physical identification, component parts, process of extracting their active principals, tests for purity, solubilities, incompatibilities and the one hundred and one details that enter into a practical pharmacist business. What is the result? When the physician starts to dispense his own drugs he has no recourse but to fall back on the ready made hand-me-down and, as a rule, cheap line of tablets and

replacers, which in many instances, by reason of the slow consumption of them by one physician, become inert. This is due in liquids to precipitation or the effects of light and heat, while in the tablet form, having in most instances a dilutant of sugar of milk which, when exposed to air, loses its water by crystallization, they become so hardened that it resists all solvents. Then again, if the tablets contain metallic salts, such as the mild chloride of mercury, they will, in presence of sugar and of alkali, be reduced to oxides.

As to the non-therapeutic effect of the tablet which has become hardened, I will quote in part from a paper written on "Aesthetic Medication" by the late Dr. I. N. Love, of St. Louis, who says: "The excipient necessary often hardens and renders the remedies indigestible, and they themselves may disturb and sometimes cause dangerous conditions; or if the vigor of the digestive canal is impaired, as it is in nearly all diseases, but particularly in typhoid fever, malaria and other infections, and when the tone of the nervous and general system has been lowered from any cause, the remedies may pass directly through the alimentary canal and their entire medical effect be lost. We thus lose most valuable time, and sometimes I am sure lives have been sacrificed by this deceptive treatment, owing to the failure of the patient to receive and assimilate the remedial agent in the form intended.

Dangerously accumulative doses have sometimes resulted from giving powerful medicines in hard tablets slow to dissolve, and these have come together at some one point in the gut and been detained there, when a sudden dissolution and absorption of the mass occurring would overwhelm the patient hopelessly."

Now a word about replacers; they are usually base and cheap imitation of well-known proprietary preparations. Their sale to the physician is accomplished by the manufacturers' representatives, who boldly assert that the preparation is the same as such and such a preparation and the principal reason advanced for its purchase by the physician is that it is cheap. This kind of business is piracy in its truest sense, and the physician who countenances it is encouraging the very thing for which he condemns the druggist, substituting.

Now the worst feature, and the one which almost every dispensing physician admits to be true, is forcing his diagnosis of a disease to fit his drugs. This necessarily follows, since it is practically impossible for the physicians who dispense to carry in their offices a complete

line of medicinal agents. What is the result? After a careful diagnosis the doctor recognizing what drug is indicated, turns to his stock of medicine and finds that he is out of the agent best suited for the disease. He then takes a chance with something else he happens to have. It may or may not do any good. The result is the patient's disease is not being properly prescribed for, his time and money are sacrificed and the reputation of the doctor is in many instances badly injured. It is also impossible for dispensing physicians, even if they be competent, to prepare many active agents which should only be prepared as they are needed, such as infusion of digitalis, spirits of mindererases, diachylon ointment; in fact I could name many which are absolutely worthless unless they are freshly prepared.

Last, but by no means least, the question of revenue is one that appeals most forcibly to the physicians. Some contend that supplying their own medicines is a tremendous burden; that in many cases they are forced to give the medicine away without receiving compensation for either their services or the medicine, and the only reason they continue to dispense is because their competitors do so. While I have heard other doctors say I can possibly get fifty cents out of the patient for his medicine when he will not pay me for my professional services. If this latter reason is the true cause for dispensing by the physician he should be required to become a licensed pharmacist and give up his professional standing as a physician. What a reflection on a reputable profession for a physician to give his knowledge and experience of medicine and incidentally a box of tablets for the mere pittance of fifty cents.

The rational conclusion to my mind is that it is decidedly inimical to the interests of the physician, his patient and the pharmacist for him to dispense his own drugs. How much more professional and what a great advantage it gives the physician to have before him the entire materia medica from which to select his medication. He can then prescribe what is indicated, not merely what he happens to have. They should write prescriptions, tell their patients to take them to a reliable pharmacist, who by virtue of education and experience is competent to properly and accurately compound and dispense them.

I appeal to all right thinking physicians to lend their aid to stamp out this custom, which is detrimental to both physician and druggist, detracts from the dignity of the practice of

medicine and lowers the standard of all who indulge in it.

I ask the hearty co-operation of all pharmacists in our effort to combat with evil, for to us it is an evil that threatens to deprive us of success in that branch of our profession for which we have fitted ourselves by study and labor, the compounding and preparation of drugs and medicines. I urge all of you to give this subject your careful consideration. Delay may irreparably injure our business. "Be wise to-day, 'tis madness to defer."

SOME PHASES OF HYSTERIA AS WE SEE IT IN THE STUDY OF THE DISEASES OF THE EYE, EAR, NOSE AND THROAT.*

By ADOLPH O. PFINGST, M. D., LOUISVILLE.

Hysteria is a factor not to be underestimated in any departure of medicine. It is regarded as a psycho-neurosis characterized by pronounced physical symptoms which may involve any part of the body and which usually mask the primary disturbance in the higher cerebral centers. Briquet (1) has spoken of it as a general disease which modifies the entire organism. It involves with great preference the voluntary functions. Unfortunately the term has been applied indiscriminately, as Lloyd (2) has said, to all odds and ends of peculiar and perverted mental phenomena. This has its cause in the variability of the clinical course of the disease.

In late years hysteria has been the subject of much careful study and has been variously classified, principally according to its symptoms. The French, for instance, have made a clinical division into hysteria minor, in which they include all emotional weakness, nervousness, pain, etc., and hysteria major, which includes the disorders of sensation and motion. Most authors make a classification of the symptoms and speak of (1) Hysteria characterized by disturbance of sensation, including anesthesia, hyperesthesia, analgesia, hyperalgesia and paresthesia; (2) Hysteria with disorders of motion, including paralyses, tremors and convulsive seizures; (3) Hysteria with vaso-motor disturbances, and (4) Hysteria with mental disturbances. These manifestations may come on separately or combined, and each in such a varied form and ex-

tent that it would be impossible in a discussion of this length to enter into the general symptomatology of the disease.

The etiology of hysteria is very obscure, but it is generally looked upon as an exhaustion of the nerve force, superinduced by unfavorable environments and habits. The disease is generally brought to a climax by sudden emotional excitement, fright or continued worry. It increases in frequency as we ascend the scale of intelligence of the races and is said to be almost unknown in the barbarous races. According to Dana 75 per cent of the cases give a family history of hysteria or some other form of psychosis. It is an old and well established fact that it occurs with much greater frequency in females than in males. Even before hysteria was recognized as a disease symptoms referable to the special senses and the throat were described under different names, the psychic nature of which we are now able to recognize. Hecker (3) described an epidemic occurring in the 13th century, believed at the time to be due to the sting of a certain insect, in which the pronounced symptoms were melancholia or unnatural hilarity, loss of voice, blindness, vertigo and the passage of large quantities of pale urine. Since then many interesting observations have been made and we know to-day that the throat and the organs of special sense are frequently involved in hysteria. The disorders of the special senses are often seen in combination with disturbances of the general sensation, and many cases of hemianesthesia accompanied by alterations of the sense of taste, smell, hearing and sight have been recorded. The loss of the sense of smell and taste are often simultaneously present and are nearly always accompanied by loss of the tactile sense of the mucous membrane of the parts concerned. The disturbance of the olfactory nerve may manifest itself in an increased acuteness (hyperosmia), diminished acuteness (hyposmia) and at times in a perversion of the sense of smell (parosmia). The sense of taste may be similarly affected as may be also the sense of hearing. Disturbance of the sense of hearing is more common than of the sense of smell and taste. The hearing may be very acute (hyperesthesia acustica) or it may be diminished in acuteness. In the latter event the degree of the deafness is in keeping with the anesthesia, which is nearly always limited to one side (hemianesthesia). It is uniform for all of the notes of the scale. If the tuning fork is placed on the mastoid process of the

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affected side, in cases of unilateral hysterical deafness, the sounds are lateralized towards the opposite side, indicating plainly the central origin of the deafness. Although the derangement of function is, as a rule, accompanied by other stigmata of hysteria, it may constitute the only symptom of the disease. Subjective noises are usually not complained of. An almost constant accompaniment of hysterical deafness is a loss of sensation or diminished sensibility of the skin of the external meatus and drum membrane. The impairment of function is nearly always unilateral, complete bilateral deafness being so uncommon that its occurrence is disputed by some authors. E. Barth (4) recently reported an interesting case of this kind in which a girl of eleven years, after a sudden fright, lost her voice and the function of both ears. The hearing returned to normal suddenly at the end of two weeks without treatment. Personally I have, to my knowledge, not encountered a case of hysterical disturbance of hearing. However, I recall one case of marked hyperesthesia affecting the ear. The patient suffered severe otalgia on one side and had no pathological lesions to account for it. Subjective examination also revealed normal functions. The patient soon developed hypersensitive areas of the extremities and showed other signs of hysteria. Otalgia is said to be one of the most frequent of the sensory manifestations of hysteria. Increased sensibility to noises has also been observed and along with it patients sometimes complain of peculiar sensations in the ear, as though there were a painful constriction in the meatus or as though there were pressure in the ear.

I would mention in this connection also those cases of mastoid neuralgia occurring in subjects otherwise normal, which are looked upon as psychic. Motor disturbances of the organ of hearing have not been observed.

The most frequent of the special senses to be involved in hysteria is the sense of sight—Dana (5), which may be affected in its various elements: in acuteness of vision, color sense, or the extent of the visual field. The most common and pronounced manifestation of disturbed sensation is a limitation of the field of vision or as it is spoken of anesthesia retina. This occurs usually on the same side as the general anesthesia, but exceptionally both eyes are affected in unilateral cutaneous anesthesia. The extent of the contraction of the field varies,

some cases having been observed in which the subjects had practically only central vision. In these cases the field extended only 5 degrees to 10 degrees from the point of fixation. The field is usually contracted symmetrically but may be oval or irregular. Central vision, in most cases, remains unaffected, although amblyopia of different degrees may accompany the contraction of the field.

The following case from my practice will serve to illustrate this type of cases:

Female, age 34, mother of two children, who has since the birth of her last child, seven years previously, at various times displayed symptoms of hysteria, suddenly complained of a disturbance of vision, the nature of which she could not describe. Subjective examination revealed perfect central vision of both eyes 20-20—but showed a marked contraction of the visual field. Mapped out more accurately with the perimeter the field for white was found to extend but 12 degrees from the point of fixation on the nasal side and 20 degrees on the temporal and about the same in the vertical direction, simulating somewhat a hemianopsia. The test of the field for colors was unsatisfactory, but there seemed to be a contraction for all colors in their regular positions. Objective examination revealed normal media and fundi. The pupils contracted slowly when exposed to light. The patient was sensitive over the region of the ovaries and plaques of anesthesia could be made out on the upper extremities. Dr. Geo. Coon, to whom I am indebted for this information, also advised me to the existence of a laceration of the perineum and the cervix of the uterus. Counter-irritation with oil of mustard over the temples and the use of a placebo in the eyes brought about a return of normal functions at the end of a week. The patient subsequently had a similar attack. Later the lacerations of the uterus and perineum were repaired by Dr. Coon and since then, six years, there has been no return of the visual defect, an occasional vaso-motor disturbance of the upper extremity being the only remaining evidence of a psychic condition.

Achromatopsia, or a disturbance of the color perception, although less frequent than the contraction of the visual field, is not an uncommon symptom of hysterical disturbance of sensation. It occurs in various forms. There may be a derangement in the relative position and extent of colors, the visual field for all colors may be limited, there may be a pervers-

sion of the color sense or the perception for colors may be lost entirely.

Amaurosis, or complete blindness, is another of the sensory disturbances met with. It is not frequent and nearly always affects but one eye. It is characterized by the suddenness of its onset, by the retention of the pupillary reaction to light, which may, however, be difficult of detection on account of the narrowness of the pupil, by the absence of pathological lesions of the media or the fundi and usually by its abrupt termination after a period varying from a few hours to several years (Harlan). It is nearly always accompanied by other stigmata of hysteria. In view of the infrequency of bilateral hysterical amaurosis the following case is offered in full:

A minister's wife, aged 42, of a neurotic temperament, gave a history of having had frequent attacks of pain along the spine in the last few years. After each attack her vision for close objects (for reading) was dim and at times it was impossible for her to read for several days following an attack. The patient was led into my office, apparently blind, on February 20th, 1897. Her vision on the day previous, as far as she knew, had been as good as it ever was, but upon retiring at night her entire surroundings appeared green to her. Upon arising the next morning she could not see, or as she expressed it, everything looked black. It seemed as though a large round black disc covered each eye around the edges of which she could see a faint light. The discs increased rapidly in size and by noon she was in almost total darkness. She complained of severe pain in the occiput and back, a burning sensation in the vertex and an occasional darting pain in the eyes. Dr. J. Hunter Peake saw her at 11 o'clock and had me see her in the afternoon. At that time she was able to recognize light from darkness, although she could not determine the direction from which the light was thrown into the eyes. Both pupils were very narrow, but contracted more when exposed to concentrated light. Movements outward were limited in both eyes, the pupils being rotated outward, but little beyond the middle line with a great effort. The interior of both eyes, examined under a mydriatic, was normal. The patient at this time was extremely sensitive to the slightest pressure over the entire length of the spine, and would cry out with pain when the spinous processes were touched. Examined in the dark-room the patient was unable to recognize darkness from light when the hand was passed between

her and the light of an Argand burner. This condition remained unchanged for about three weeks, during which she had several attacks of pain in the occiput and back. Dr. J. M. Ray saw her about a week after the beginning of the trouble and, I believe, concurred in my diagnosis of hysterical amaurosis. The patient was placed on a disagreeable mixture of potassium iodide, and leeches applied to her temples and counter-irritation used with no avail. On March 12th, 21 days after the beginning of the trouble, while walking about in her room, the patient stumbled and fell to the floor. The fall was followed immediately by another attack of pain in the back and head. A few hours later she again described the large black discs as she had seen them in the beginning of her trouble. Examined at that time she had no perception of light centrally and a questionable perception at the periphery. The interior of the eyes was unchanged. Upon arising the following day the patient could see large objects and by the afternoon her vision in both eyes was 20-200. From that time on there was a rapid improvement and when I saw her on March 18th her vision had returned to normal or 20-20. The fundi were still unchanged. A month later I was called again to see the patient and found her in the same condition as upon my first visit. The areas of hyperesthesia, however, were more numerous and extensive. The skin over the entire abdomen was so sensitive that mere contact with the hand would cause her to cry out with pain. The spine was again extremely sensitive, especially over the spinous processes. Near the posterior superior spine of the ilium a hyperesthetic congested area, about 3 inches in diameter, could be mapped out. The patient appeared to be in great agony. Recovery from this attack was sudden as in the previous one. Various means, entirely suggestive, were employed in the hope of cutting short the attack, but blindness continued for ten days and then, as in the other attack, took several days after beginning of improvement, for the vision to return to normal. As the family removed from the city soon after this attack I have been unable to keep the case under observation.

The diagnosis of this case can hardly be doubted. Its hysterical nature is indicated by the suddenness of the onset of the blindness, the retention of the pupillary reaction, the absence of pathological lesions and its rapid and complete recovery. The diagnosis is substantiated by the hysterical backache, the hyperes-

thesia over the spine and abdomen, by the paresis of the ciliary muscles and contracture of the internal recti. Complete bilateral loss of every form of perception, as we saw it in this case, is very uncommon. Kerneis (6) in 1902 reviewed the literature on the subject, giving an outline of the cases on record. He was able to find 31 cases of complete bilateral amaurosis of a purely hysterical nature. Since then four more have gone on record, the last by C. Roux in a child of nine years (7). The cases occurred mostly between the ages of 15 and 30, 9 years being the youngest and 39 the oldest subject. Most of them recovered their function completely in a period varying from a few minutes to a few weeks. The longest period of blindness was 18 months (Oppenheim, Moore).

The eye is sometimes the seat of hysterical hyperesthesia, although it is not seen with the same frequency as anesthesia. It is characterized by excessive sensitiveness to light, lachrymation and flickering before the eyes. Monocular diplopia and polyopia may also be mentioned among the less frequent of the ocular manifestations of hysteria. Hemianopsia or loss of perception in half the field of one or both eyes does not occur in hysteria, according to Charcot.

Disorders of motion affecting the ocular apparatus have also been observed in hysteria. The intrinsic muscles may be affected, manifested usually in a weakness of accommodation or the extrinsic muscles may be involved. It is believed by most authorities that paralysis of the external muscles does not occur and that the isolated cases reported as paralysis were contractures of the antagonists of the muscles apparently paralysed. Tonic contractions or spasms are the most frequent of the motor disturbances, but tremors or clonic contractions (nystagmus) are not uncommon. Contractures involve most frequently the internal rectus muscle, but cases of contraction of the orbicularis, simulating paralytic ptosis, are not considered infrequent. It is a fact worthy of mention that nearly all of the neuroses affecting the ocular apparatus follow some injury to the head.

Going on with the consideration of the hysterical affections of the throat, we find both motor and sensory functions frequently deranged. The globus hystericus, so often described by the hysterical patients, "as though a lump were in the throat," is classed with the paresthesias. This perversion of common sensation and diminished sensibility or loss of

sensation of the mucous membrane of the pharynx and larynx are among the commoner symptoms of hysteria. Anesthesia can be demonstrated only by palpating the surface of the throat, and as it usually causes the patient no inconvenience it frequently remains unobserved. Sometimes attention is attracted to it by the disturbance of the sense or taste which may accompany it.

The motor disturbances of the larynx represent the most frequent paralysis met with in hysteria. It usually affects the muscles employed in phonation and is consequently manifested in aphonia. The adductor muscles of the cords are the most frequent involved and results in an inability to approximate the cords. The tension of the cords is also interfered with by involvement of the crico-thyroid muscles. The laryngeal muscles are always affected equally on both sides in hysteria. The aphonia in nearly every instance begins suddenly, usually after some psychic excitement. It lasts for a variable length of time and nearly always disappears suddenly. It is also characterized by its tendency to relapse. The patients, although unable to utter audible sounds, can usually speak in a whisper. Rarely there is an absolute loss of speech—hysterical mutism.

The laryngoscope shows, in these cases an inability of the cords to approximate during phonation. During expiration the cords assume a position midway between adduction and extreme abduction, the so called cadaveric position. A further separation takes place during inspiration. Paralysis of the other muscles of the larynx in hysteria is rare. Contractures are also uncommon, and when they occur are nearly always paroxysmal in character. It is in the contractures of the adductors that tracheotomy has become necessary in a few instances to prevent death.

Cases of hysterical aphonia are so common that they fall frequently into the hands of the laryngologist and are seen by most practitioners. They can be positively diagnosed only with the aid of the laryngoscopic mirror, which shows the symmetrical deficiency of phonatory muscular action and the absence of gross pathological lesions. The suddenness of the onset and the general hysterical temperament are valuable aids to the diagnosis, as is also the anesthesia of the pharynx and larynx and the cough, which is frequently present.

It would be of little interest to the members of the society to hear a report in detail of a

number of cases of this kind. However I will report several very briefly, merely to impress certain features of this class of cases. The first occurred in a lady of 43 years. She was exposed to a draught at night over which she worried considerably, and upon awakening the following morning she was unable to speak audibly. Dr. John E. Hays saw her at the time, recognized the trouble and instituted treatment accordingly. After two weeks, in which the condition remained unchanged, he informed her that an operation would be necessary to restore her voice. I was called in consultation and found a typical case of hysterical aphonia with paralysis of the adductors. After making elaborate preparations for the supposed operation and making several applications to the throat to impress the patient, I passed a cold uterine probe between the vocal cords, making considerably lateral pressure during the procedure. "Let me see that," were her first words, uttered in a hoarse, partially audible voice as soon as the instrument was withdrawn. From an adjoining room I then commanded her to count "ten," assuring her that this would be possible. So it was and with our assurance that her voice would be fully restored in an hour she made a prompt recovery.

The other cases occurred in three young girls, aged between 22 and 30, all referred to me by Dr. B. Lammers, of this city. The girls were associates and soon after the first one lost her voice one of her friends became similarly affected. Both responded to suggestive treatment, consisting of three applications to the throat on three successive days and the use of the faradic current on the neck with the assurance that the voice would return suddenly a few hours after the last treatment. The third girl, who had seen much of her friends during their period of aphonia, became similarly affected two months later. Although longer in recovering she also suddenly regained the function of her throat under similar treatment.

The last two cases would suggest the association with the aphonic subject as a causative factor in the hysterical disturbance, while all of them demonstrate the influence of suggestion in the treatment of functional neuroses.

The treatment of the special forms of hysteria, considered in this paper, does not differ materially from the treatment of hysteria with other manifestations. The predisposing condition must be counteracted by hygienic, dietetic, moral and medicinal measures with the

view of increasing the power of resistance of the body and exerting an invigorating influence upon the nervous system. The special symptoms must naturally be treated individually, each case demanding different attention. The treatment is all more or less suggestive and depends largely upon the disposition of the patient and the degree of intelligence. In some cases a rapid cure can be promised, while in others, especially in the more intelligent, restoration of the function must be brought about gradually. The personality of the physician has also some influence upon the outcome of the disease, kindness and firmness constituting the requisites of his personality. The electric current has probably been employed more frequently than any other form of suggestive medicine. The opening and closing of the galvanic current in functional disturbance of vision is very impressive and suggests to the patient the return of the lost function. The faradic current, causing muscular twitching, suggests the return of muscular contractility.

Blisters and counter irritants of other form, leeching and bleeding have all been employed more or less successfully. Persistent cases will sometimes respond when preparations are made to operate for the relief of the affection, or where the operation is actually feigned. Von Barrenger (8) recently reported a striking case of this kind, in which the enucleation of an eye had to be feigned. A phthisical eye, result of an old injury, had been very painful for months and had resisted all treatment. With the attacks of pain the patient also had other signs of hysteria. During the phantom operation bloody cotton and an enucleated eye were handed before the patient. Relief was instantaneous.

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DISCUSSION.

Dr. Wm. Cheatham, Louisville: In discussing this paper of Dr. Pfingst I shall give extracts from the work of Norris & Oliver, and pay special attention to hysteria as evolved in the eye, wishing to give some of its peculiarities which Dr. Pfingst in the short time allotted him had not space to refer to.

Two of the most constant symptoms of hysteria of the eye are concentric contraction of the visual field for white, on a black background, giving what is known as a tubular or telescopic vision, and spasm of accommodation with or without a contracted pupil. In making a test of the visual field for white, the field will be found larger if the object is moved from the center to the periphery, than from the periphery to the center. Convulsive attacks decrease the visual field. The extent of the visual field can be increased by glasses, either plain, convex, or concave, white or colored. Pinching or irritation of the skin when there is no anaesthesia, increases the visual field; may bring it to normal. When amblyopia is in one eye only, irritation of the skin may make it disappear from the eye involved and appear in the fellow eye. An important point in diagnosis is, that even in profound amaurosis the pupil reacts to light. If only one eye is amaurotic, there is binocular vision; that is leaving both eyes open, two images are seen if a prism is placed before one eye with base up or down. This hemiopia has never been observed in hysteria; cases have been reported, but not confirmed. Hysterical amblyopia is always accompanied by other disorders; we have *hemianesthesia* of the skin, the *mucera* or other sense organs. Sometimes it may be limited to the skin about the amblyopic eye, not only the skin but the conjunctiva and the cornea may be involved. The entire cornea rarely loses its sensitiveness. Sometimes sensation of center alone is left. There may be total anaesthesia of conjunctiva and cornea (rare), yet the lid movements may be perfect. There may be absolute anaesthesia of the cornea and conjunctiva with abolition of oculo-palpebral reflex, yet the tears will flow freely if the cornea is irritated. We may have hemi-anaesthesia, yet the amblyopia affect both eyes. In hysteria we have usually inversion of the color field, for the consideration of which blue, red and green are sufficient. The so-called characteristic dyschromatopia is that the red is the least affected. The field from the center as to disappearance, is green, blue, red. It must be remembered that in tabetic

and alcoholic amblyopia, red is the first affected. In the latter the scotoma is always central. Again, in hysteria of the eye we have monocular diplopia and polyopia. Again, hysterics color blind in each eye when tested separately, have perception of color when both eyes are used again, with absolute amaurosis there is photophobia. As to *motor* disturbances of the ocular apparatus it must be remembered that this is almost always in the nature of contractions, although the symptoms present the objective characteristics of paralysis. We must not forget, as stated before, that hysteria is almost always associated with some other disease. That many of the pathognomonic symptoms of hysteria are symptoms of other diseases. For instance, concentric contraction of the visual field is an almost constant associate in epilepsy; also in central tumor with neuritis and intra-cranial pressure. Again, hysteria of the eye is frequently associated with Basedow's disease, disseminated sclerosis, Frederick's disease, tabes, syphilis, and in lead and alcoholic poisoning. I have had two cases of hysterical aphonia, to which I wish to refer. One was in the person of a business man of this city, who married late in life. When he came to me could whisper only. These cases usually give excessive lip motion in their efforts to speak. They can usually laugh or cry. This man I readily relieved by an application of ice water to his larynx, internally. He had sub-acute laryngitis, which had to be treated afterwards. The second was in the person of a school girl about fourteen years of age. Whenever an examination approached she had nervous aphonia. She had some menstrual trouble. Ice water to the larynx internally always relieved her; her attacks sometimes recurred each day for a day or two. The disease is rare in childhood and in this country rare in men. In France it is, I believe, about as common in men as in women.

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Dr. Curran Pope, Louisville: I want to speak about some of the conditions which we meet with in hysteria that we should always bear in mind.

I think we should get away from the idea that hysteria is a functional disease. The functions involved are the functions particularly connected with the psychosis itself, which are thrown out of the nerve connection; that is to say, in the case which the essayist mentions, it was not a functional trouble at all, but a cerebral condition, a true psychosis.

With regard to the etiology, there is probably no trouble of which we know less than we do know of the etiology of hysteria. We are quite familiar with its symptoms and with its manifestations, but as to the etiology, we know practically nothing.

We are usually satisfied to say that the immediate etiologic factors are the prime factors, be they physical or psychical, it makes no difference.

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Dr. J. A. Stucky, Lexington: I would like for the essayist to tell us what has been his observation as to the results of the use of suggestion in the treatment of these conditions.

In quite a number of cases, I have found that if I could take the time, and used tact, I received remarkable results from the use of suggestion.

* * *

Dr. George P. Sprague, Lexington: Hysteria may be a disease in itself, complicated with other diseases, or by itself, only apparent through reflex conditions, without any other psychic symptoms. I mention this, because I do not believe it was brought out by any of the other speakers.

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Dr. L. H. Landman, Covington: I discussing hysterical amblyopia, one point may be brought out that is characteristic of this malady, and consequently of great diagnostic value; the faculty of orientation remaining good, no matter how greatly the field of vision may be contracted. In other diseases of the eye, in which there is concentric contraction of the visual field, as in retinitis pigmentosa, central vision may be good, the patient being able to see perfectly to do fine work; but peripheral vision is completely lost, and he can scarcely make his way around without assistance, even by day. In hysterical amblyopia, however, the patient presents the symptoms of concentric contraction of the field of vision, but he can make his way around without coming in contact with anything or stumbling.

I had a case of hysterical amblyopia in a little girl nine years of age, sent to me by Dr. Wright, of Troy, Ohio. After an attack of indigestion, the child discovered that she could not read her books, nor could she see what was written on the blackboard, across the room. I discovered no changes in the fundus upon ophthalmoscopic examination, so naturally diagnosed the trouble as of nervous

origin. The most striking feature of the case was the ability of the child to go around anywhere, to wander around in the strangest places, without stumbling or hurting herself in any way, although in testing, the field of vision was markedly contracted.

It occurred to me that this peculiarity is very similar to the phenomenon of guarding against injury which we find in convulsive hysteria. Convulsive hysteria differs from epilepsy, in that, in the fall, the patient goes down easily, striking the softest place that is convenient, thus guarding herself from injury, although seemingly unconscious. In other words, the inherent sense guarding one's self from injury is not lost. The same is true in hysterical amblyopia. Peripheral vision is of service only in orientation, to prevent us from stumbling over objects in our way, or running into anything that is moving toward us from the side, by giving us hazy pictures of these things, yet distinct enough to warn us against danger. This faculty of orientation which guards against injury, is well preserved in hysterical patients; but when an object is brought gradually from the periphery toward the center, they cannot see it until it is brought nearly in front of the visual line.

* * *

Dr. C. Z. Aud, Cecilian: Hysteria is a disease that causes us all trouble. The question is, how can we relieve the afflicted patient? We have no time to talk about neuroses after we have been called. What the patient wants is relief, and that immediately, if possible.

Dr. Stucky said something about suggestion; I have found that a hypodermic injection of morphia answers the question, and my experience shows that this treatment is one which may be used with advantage.

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Dr. Pfingst, closing: Owing to the expiration of my time, I did not get to read to you what would perhaps have been the most interesting part of my paper.

I have nothing to add.

We believe it was Eugene Field who said that the best aids to literary success were "a good stub pen and eight hours of work every day."

"He writes," explained the man, and straightway the crowd bowed before him and worshipped. "He sells," explained the man, and the first hero was forgotten.

"THE RELATIONS OF THE TRAINED NURSE TO THE PHYSICIAN."*

By ARCH DIXON, M. D., HENDERSON, KY.

First of all it may be said that the vital point in the relation of the nurse to the physician consists in carrying out intelligently his orders. This constitutes the nurse's whole obligation to the medical man. Failing in this is the unpardonable sin, for by this failure she not only does the doctor and his patient a great injustice, but she places herself in a position at once so false, that discovery blasts her prospects and she falls from the place of high esteem in which she was held by the doctor and her usefulness is either lost, or greatly impaired. I rejoice to say that the *real* nurse rarely or ever is guilty in this regard, and then it is usually an error of the heart and not of the head, but now and again this fault is committed by some self-complacent, opinionated, or stupid woman, who, holding a nurse's diploma, meddles with the physician's prerogative, or through vanity airs her graces and accomplishments. After all it is a rather nice question to say where the line shall be drawn. No one can tell when the nurse may be compelled to act on her own responsibility, or what emergency may arise. The nurse of poor training who has not been taught her proper position, fearing to expose her ignorance, will assume opinions and functions she is utterly unqualified to form or fulfill and "knows too much." It is the nurse of much and good training who avoids the great danger of a little knowledge a little beyond what is absolutely required for her duties. There is a great diversity of opinion even in matters that are by good judges thought necessary for a well trained nurse. A year ago, in Chicago, to my surprise, I heard a prominent physician say "that nurses should not be taught the properties of drugs such as opium, aconite, strychnia, etc., for with such knowledge they were prone to overstep the line and prescribe for patients without consulting the doctor." He further argued that "when the nurse had given the exact dose her duty was done." If ever the day comes when remedies always act as desired, when human fallibility is infallible, such instructions may be out of place. There are few physicians who have not at some time been grateful to a well trained intelligent nurse for her prompt discretionary action. Personally, I have known the lives of more than one patient saved by the prompt and intelligent action of

the nurse, and doubtless there are other physicians who could state the same.

It might as well be argued that properties and doses of drugs should not be taught in schools of pharmacy, because after graduation unscrupulous corner-store druggists prescribe for their customers. It is the use and abuse of gratuitous dosing by pretentious and self-conceited nurses that bring all into question both good and bad. The nurse who knows physiological properties is none the less valuable; the same system that teaches this also teaches and enjoins upon her to refrain from dosing, but it does fit her to recognize facts that her physician may be glad to know and cause him to feel grateful for her knowledge. The best nurse is not the one who has the most theory, or can make a brilliant show of information of a semi-medical nature, nor is she the best who does her work like an automation. She is the best who intelligently does those things that contribute most to the patient's relief or recovery, being always loyal to the orders and methods of the attending doctor. Undoubtedly every practitioner has been annoyed, perhaps exasperated, by the disobedience, lack of tact, or other shortcoming of his trained nurse. Unhappily these instances are too true and it would be a charitable view of this question to accept the situation not as the result of any system, but rather as the weak side of human nature and endeavor to wipe out that which is bad and show a way to produce the good.

Two years of public or private hospital life cannot remodel a nurse's disposition. Those not familiar with the obstacles cannot appreciate the difficulties encountered in this endeavor. It often happens that a nurse in training who not only gives excellent satisfaction, but is known to act intelligently, and makes herself very valuable in the hospital, fails of success in private nursing. It is said she does not "get on well" with the family and the cook; is too much given to method and too little to receiving suggestions; wants too many things to work with, requires too much waiting on, and many other criticisms of like character. I have followed several such cases and I find that in most of them the complaint is made of recent graduates. Hospital work is unattended by these difficulties; the system itself is such as either make them impossible or smooth the way and the nurse is restrained from error by the discipline of the institution. In family nursing she meets with new surroundings, a change in everything except a

*Address delivered to trained nurses at Dr. J. H. Letchers' Hospital, May, 1904.

patient to nurse. This same nurse, in time, finds out how to avoid complications, adapts herself to varying conditions, learns policy, develops tact, and gives excellent satisfaction, greatly to the relief of her physician, to whom all of these complaints are made. It is a source of great satisfaction to the doctor to find that his nurse has tact, for by it she is enabled to overcome many obstacles, to smooth many rough places, both for herself and him.

The public, as represented by the families of the patient, is frequently more at fault than the nurse. Although the public have a right to judge the nurse, she is often more sinned against than sinning.

Most persons deem themselves competent to pronounce verdict on her work and methods, and she, failing to meet their views, is adjudged as coming short in her offices.

The nurse should always remember that the doctor in sending her to his patients, or in recommending her services to the patients of others, assumes a responsibility for her skill, her behavior and I might say for her moral character. It often happens that the nurse, with all her technical skill and admirable training in implicitly obeying the physician's orders, lacks that minimum of culture, I will call it, and delicacy in dealing with patients of refinement and sensitiveness, which I should be inclined to regard as extremely essential and as almost equal in importance to her professional training and perhaps of greater importance to the welfare of her patients.

A great surgeon once made the remark that when he was sick he wished his physician to do something more than to merely look at his tongue and feel his pulse; that at such a time he wanted a little sympathy; the *man* desired some attention as well as the body.

Besides all the science and skill of the modern day, there is still something more needed by the physician who would be acceptable to his patients, particularly those who have been carefully raised. *He* needs something of refinement and tenderness and culture; for besides dealing with a diseased lung, or an injured limb, as a problem involving more science and skill, he is also dealing at the same time with a human entity of delicate nerves and acute feelings yearning for a bit of sympathy. He is bound to recognize the psychic as well as the physical needs of his patients. So it is to a lesser degree with regard to the

nurse; her patient expects something more of her in the way of refinement and tenderness than she does of her cook or her house girl.

It will not be putting it too strong to say that the doctor expects of his nurse that she be, to some extent, possessed of culture and refinement, and above all he expects her to be a *gentle woman*. Tenderness, gentleness, and delicacy of step and voice are of as much, or more value, in his eyes than the ability to take the temperature correctly or to give a subcutaneous injection. Therefore, whatever you do, in the sick room, should be done gracefully, in order, at the proper time, without noise and above all without fussiness. The doctor expects of his nurse severe personal neatness and cleanliness and strict application to the patient.

The relations of the physician to his patient are of the utmost confidence and last degree of trust, in his honor, his sympathy, his tenderness and his ability and will to render the necessary aid. Not the husband or the wife, nor patient or child, nor friend, nor brother, nor lawyer, nor priest can stand in more, and oftentimes not in such, intimate relations to society as the physician. Matters of the mind as well as those of the body; matters that affect the honor and peace, as well as those that affect the health of individuals and families are laid bare to the physician. The relations of the nurse to her patients are only secondary in importance and sacredness to those of the doctor, and if she is not faithful to this trust she incurs not only his displeasure, but his contempt. In conclusion, I would say that nothing gives the physician more confidence in his nurse than the knowledge that she is a true and conscientious Christian, and this confidence is shared by the patient, no matter whether he be believer or atheist. She should have a faith which never wavers, and while she should more frequently speak her religion by her acts, by her gentle ever present kindness to those who suffer, yet the opportunity will often come to her to help the one who is approaching the dark river to realize that it is but a little way across the strange country to the beyond.

"You can to him make it appear that so close it lies, that if he tries when his sight is clear, he can see the gleaming strand, and know and feel that those who have gone from here, come near enough to touch his hand."

In regard to the relations of the doctor to the nurse, well, as Rudyard Kipling would say, "that is another story."

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**THE ANNUAL SYSTEMATIC EXAMINATION
OF SCHOOL CHILDREN'S EYES, EARS
AND THROATS BY SCHOOL
TEACHERS.**

It is a fact well recognized by ophthalmologists that school children, in whom defects of vision or refraction remain undetected or neglected are accredited with dullness and stupidity. Otologists also frequently see children who acquire the same reputation on account of deafness and obstructed respiration. It is common observation that children thus afflicted are, by the correction of the defects of hearing or vision or by restoration of natural breathing, suddenly converted into bright scholars and that their entire future is thus changed. On the other hand failure to discover or correct such errors not only retards the development of the child mentally, but we find children of this kind backward in their physical development. They grow careless and lazy and acquire habits which may eventually lead to depravity and crime. These facts being conclusive, should we not welcome a movement which has for its object the early detection and treatment of the children?

The Germans have, for a number of years, realized the importance of a routine examination of school children's eyes and ears, Prof. Herman Cohn, of Breslau, being pre-eminent in the work. In many of the large cities of Germany an advisory board, consisting of a school inspector, a builder or architect and a physician decide many questions regarding the hygiene of the schoolroom. The height of the benches is regulated to suit the grade, proper means of ventilation and proper light are supplied and books are selected with special reference to the nature and size of the type and grade of paper used. Prof. Cohn has for years advocated the additional appointment of a school ophthalmologist and otologist. It was his idea to have every child examined by the appointed specialists at the beginning of each

school term and to correct any defects of hearing and vision within their power. The matter has been taken up in this country, though in a more satisfactory way, by Dr. Frank Allport, of Chicago. Instead of having certain specialists appointed to examine the children, which would necessarily exclude all others, he suggested the adoption of some simple means by which the teacher could detect the presence of defects and advise the parents of the children accordingly. It should then be left to the option of the parents whether the condition receive attention and if so the selection of the physician should be left to them. In other words the teacher merely suspects existing conditions and advises the parents accordingly and thereby places the responsibility upon them. The plan is to have the children examined at the beginning of each school term by the teacher. Vision charts especially printed for school use, with attached instructions so simple that any teacher can carry out the examination, are supplied the teacher of each grade. Simple instructions to enable the teacher to detect defects of hearing or obstruct respiration are also supplied. Schools should be furnished printed forms to be filled out by the teacher advising parents of defects suspected and suggesting consultation with the family physician or some specialist. Such examinations would consume very little time and the materials needed would be of very little expense.

After meeting with much opposition, especially on the part of the profession, Dr. Allport has succeeded in getting the State Board of Health of many of the States to adopt resolutions requesting the school boards to place the plan suggested by Allport in operation in the public schools. Through the untiring efforts of Dr. Allport the American Medical Association, at the 1903 meeting, and many of the State and County societies have adopted resolutions urging the examination of school children's eyes and ears. Kentucky has fallen in line and at the recent meeting at Lexington adopted the following resolution:

"Whereas, the value of perfect sight and hearing is not fully appreciated by educators, and neglect of the delicate organs of sight and hearing often leads to disease of these structures," therefore, be it

"Resolved, That it is the sense of the Kentucky State Medical Association that measures be taken by boards of health, boards of education and school authorities, and where possible, legislation be secured, looking to the examina-

tion of the eyes and ears of all school children, that disease in its incipency may be discovered and corrected."

It is to be hoped that the State Boards of Health and Education will become interested in this important matter, for it is through them alone that that measure can be put into actual operation. ADOLPH O. PFINGST.

BACILLUS AEROGENES CAPSULATUS

The discovery and identification of this micro-organism by Welch & Nuttall in 1892 was an important step. It added one to the anaerobic group of bacilli which contains some of the most pathogenic organisms producing disease in man, and increased experience and the observation of skilled observers in many places have fully confirmed all the statements made by the distinguished discoverer and his co-laborers. Indeed, the results of the further study of this organism seem to show that its capacity for harm is greater than was thought at first and there are not lacking cases where the most extensive mischief seems to have been wrought by the "gas bacillus" without the aid of the usual pus producing organisms. It is especially in connection with compound fractures which are contaminated with earth, with operations in the perineal regions and with uterine infections that the greater part of the reported cases deal, though many other avenues of infection are reported in the literature of this organism. The knowledge of the habitat and haunts of the "gas bacillus" ought to be borne constantly in mind by persons obstetricious; and in wounds where it may be present every particle of foreign matter ought to be removed and no dressing which excludes the air ought to be thought of. While it is probable that it does not deal many blows, it is certainly capable at times of dealing swift and deadly ones. The micro-organism while itself non-motile certainly travels with amazing swiftness at times, being possibly propelled by its own gas, and while it is an unsettled question whether the destructive effect on the tissues is due to an elaborated toxin or not, the tissue changes, such as the destruction of the cells in the "*schaum leber*" or frothy liver and other organs which it produces certainly suggest a resemblance to the effects of other toxin producing organisms. All of which teaches—in the language of Erop—that the possible presence of this micro-organism under the circumstances named ought to be borne in mind by the practitioner and if the peculiar, unmis-

takable sign of its presence—gas in the tissues—be discovered, prompt and unhesitating measures ought to be immediately instituted. In this way lives that are otherwise lost may possibly be saved. J. A. FLEXNER.

PROSTATECTOMY.

This surgical procedure has at last come to occupy a definite place in the treatment of the condition known under the term "Prostatism." That it is but one of the methods of treating this distressing and fatal malady is the fixed belief of the writer; its indiscriminate employment in all cases would soon bring the operation itself into unmerited disfavor. Now that time and experience have demonstrated the wisdom of its employment in certain cases, there still remain three important points to be cleared up, and these are, 1st, the cases of Prostatism that are to be subjected to this procedure; 2d, the method of operating to be carried out in a given case; and 3rd, the results to be expected from the removal in whole or in part of the gland and its contained enlargements.

The cases that are to be subjected to prostatectomy are, in the opinion of the writer, the following: Cases presenting well marked enlargement of the gland, giving rise to obstruction of the urinary outflow and residual urine; cases in which attacks of retention are frequent; cases requiring the continual use of the catheter; cases in which the urethra is so irritable as to prevent the employment of palliative treatment. The following cases are not to be subjected to operation: Cases with moderate degree of enlargement, with little or no residual urine; cases which hygienic and palliative measures render comfortable and which have not been complicated by infection; cases presenting any evidence whatever of kidney involvement or that show great weakness or debility from any cause.

The choice of operation lies between three methods, the suprapubic, the perineal, and the combined. The trend of surgical opinion today is toward the adoption of the perineal method in all cases except those in which the enlargement of the lateral or middle lobes is situated so high in the pelvis that they can be operated satisfactorily only by the suprapubic or combined methods.

The mortality of the perineal operation is about 6 or 7 per cent., while that of the suprapubic is from 11 to 12 per cent. Goodfellow reports 74 removals by the perineal method with 2 deaths, and Albarran 59 by the same

method with 2 deaths, the lowest mortality yet reported for such a series of cases. There seems to be considerable difference of opinion in regard to the exact method of operating through the perineum; some favor the inverted Y incision, attacking the gland extra-urethraly and, after incising its capsule, peeling it from above downward; others attack it through the urethra, entering the capsule through incisions in the lateral walls of the prostatic urethra; some intentionally remove the floor of the prostatic urethra, others preserve it; some claim to leave the ejaculatory ducts intact, which, if compatible with a good result would be highly serviceable to those patients desiring an heir. Each operator seems to differ in some respect from the other, still each reports good functional results, which seems to indicate that each method accomplishes its purpose. Finally, the results to be expected from the removal in whole or in part of the gland and its contained enlargements are excellent so far as the urinary function is concerned; the obstruction is removed, the bladder wall in many instances regains its tone, the cystitis disappears, the bladder retains urine from 3 to 4 hours, and there is little or no residual urine. It was at first thought that the sexual function would not be impaired, but the experience of the writer has been to the contrary, his cases varying from marked impairment to total abolition, a serious drawback in those patients still sexually active. So far no strictures have been reported, even after complete removal of gland and contained urethra.

IRVIN ABELL.

PROGRESS IN GENERAL SURGERY

Under the charge of Irvin Abell, M. D.

SURGERY OF THE PROSTATE.

Three articles dealing with the surgical treatment of the prostate have recently appeared, which seem to the reviewer to mark important steps in the history of this direful malady; the articles referred to are those of Deaver, Watson, and Albarran. *Surgery of the Prostate Gland*, John B. Deaver, *July American Journal of the Medical Sciences*; *The Operative Treatment of the Hypertrophied Prostate*, Francis S. Watson, *June Annals of Surgery*; *The Radical Cure of Prostatic Hypertrophy*, J. Albarran, *Vol. IV. International Clinics*.

Deaver maintains that the suprapubic prostatectomy of Freyer is the best treatment,

with the reservation that it is not immediately applicable to every case. He advises that a man of sixty or under, who rises once during the night to empty the bladder and is conscious of this becoming an invariable habit, and who presents residual urine to the amount of only one or two ounces should be instructed to pass the catheter at night before retiring; as long as he remains in statu quo he is to continue this treatment; as soon as infection occurs or his case gives evidence of progressive enlargement and bladder change he is to be subjected to operation; Deaver prefers the suprapubic method of Freyer in all cases except those which present fibrous enlargement, obstructing the flow of urine not so much from enlargement as by pressure on the prostatic urethra; in this latter class of cases he makes perineal operation with the straight perineal incision, dissecting the rectum from the gland, which is then separated from above downward, and the operation completed by introducing a drainage tube into the bladder through the membranous urethra and packing the cavity from which the gland was shelled, lightly with gauze. The technique of the suprapubic method is that of Mr. Freyer. Deaver states that the power of procreation is lost by both methods, due to the unavoidable injury to the ejaculatory ducts; but, as it is questionable whether the spermatic fluid would be ejected without the contraction of the prostate, and as it is probable that it would not be fertile without the secretion of the prostate, the destruction of these ducts is a secondary consideration. The power of intercourse is less apt to be impaired after a suprapubic enucleation than after a perineal prostatectomy, and in some patients in whom it has been lost prior to operation, this procedure appears to have restored it.

Watson's conclusions are, 1st; the most important single factor in determining whether or not radical treatment should or should not be applied is the capability or the reverse of the renal function. Other than this are the general strength or feebleness of the patient, his comfort or suffering, and the probability of the continuance of the one or the occurrence of the other if operative treatment is not applied. 2d; radical operative treatment has not yet reached the stage at which we are justified in saying that all cases of prostatic hypertrophy should be submitted to it as soon as the condition is clearly made out, and has begun to give rise to slight symptoms. But we are justified in saying that patients should be given the benefit of it at a much earlier stage of the

malady than it has been customary to apply it, and that where it is applied by those skilled in its performance, as soon as the hypertrophy can be detected by examination, and if at the same time it is already giving rise to well-marked symptoms, and the patient's condition is not unfavorable to the performance of an operation of this magnitude, the mortality of the operations, were they applied at this time, will be a trifling one, and their risks not nearly so great as those entailed by the use of the catheter, assuming the latter to have been employed instead and under the same conditions. 3rd; the operations should be undertaken under favorable circumstances as soon as the above conditions occur. In regard to choice of operation Watson believes the complete removal of the gland by the perineal route to be the operation of choice. When any condition is present which makes the perineal operation too difficult of performance, or is a contraindication of any sort to its application, the suprapubic operation is the operation of choice, and when contraindications are present which make this operation undesirable, the Bottini becomes the operation of choice, and when the patient's condition is such as to make any of the above three methods inappropriate, and we are obliged to do something, we will do a palliative operation for drainage.

Albarran believes that during the first period of the disease, when there is not yet any retention of urine, the operation can no doubt be postponed; but even under these conditions, if the symptoms are annoying, and if the gland is large one can operate to advantage. When chronic, incomplete retention is present, the operative indication is clear; it becomes more urgent in patients in whom the bladder residuum increases in spite of the use of the catheter, and particularly in the case of those with whom the use of the catheter becomes more and more difficult. In cases of complete retention, however chronic the state of affairs may be, the operation ought, in his opinion, to be performed. He does not operate on very old patients when the use of the catheter is easy; he regards as contraindications intense pericystitis and prostaticitis, bilateral renal trouble, advanced urinary cachexia, or other causes connected with the patient's general condition which counterindicate any important operation. Albarran prefers the perineal operation exclusively claiming that the suprapubic method offers uncertain results except in those cases in which the obstruction is confined to the neck of the bladder and does

not extend to the prostatic urethra, and finally that the death rate is much higher by the suprapubic or abdominal route 10 to 12 per cent. as compared to 4 to 7 per cent. for the perineal, some operators having even smaller death rate than this for the perineal route.

SIMPLE METHODS FOR REDUCING HUMERAL DISLOCATIONS.

E. Boulton in the June issue of the *Journal of the Medical Sciences* gives two simple methods of reducing luxations of the humerus, as follows: The surgeon stands behind the patient, who may sit or stand, as convenient. The hand of the operator is partially closed, the thumb extended and the wrist pronated. The ball of the thumb is placed below, against, and parallel to the lower margin of the scapula on the axillary border, just external to the inferior angle. Firm pressure is exerted, and the wrist is slowly and steadily supinated, pressure upward and inward being exerted at the same time. This manipulation, if properly performed, pushes the lower angle of the scapula upward and toward the median line, depressing the lower lip of the glenoid cavity, and usually results in the prompt reduction of any variety of humeral dislocation. In the subspinous variety should reduction not occur it is suggested that pressure with the other thumb be made upon the head of the dislocated humerus in the direction of its long axis.

In subcoracoid or subglenoid dislocations, the operator stands behind the patient as before, and places his hands on the patient's shoulders, with the palm of the hand at the base of the ring finger resting upon the acromion process of the scapula, the ball of the finger being placed below the clavicle. The ball of the middle finger is placed just above the clavicle and that of the thumb beneath the spine of the scapula as far toward the inner end of the spine as is compatible with stability of position. The fingers should be slightly flexed. The elbows should be extended. Quick but steady pressure should then be exerted in a downward, inward, and backward direction, considerable force being used. This method has proven prompt and efficacious, even in cases in which the parts were greatly swollen from contusions sustained at the time of the injury.

A CASE OF COMPLETE BILATERAL DUPLICATION OF THE URETERS.

Henry B. Dechard in the January *American Journal of the Medical Sciences* reports the

case of a male negro who died of dysentery, and who upon autopsy was found to have two ureters to each kidney, each ureter having a separate opening in the bladder. The kidneys were normal in size, as were the four ureters; the relations of the ureters to the vessels at the kidney hilum and to structures elsewhere in their course were normal; the bladder orifices, two on each side, were 1 cm apart; the mesial or adjacent ones being $2\frac{1}{2}$ cm apart. Dissection of the pelvis and calices showed that the upper ureter drained the upper third of the kidney, while the lower one drained the lower two thirds. In March, 1903, A. H. Gould found only eight cases in the literature, to which he added two more. Unilateral duplication, partial duplication on both sides, and bifid kidney pelvis are not uncommon findings.

The writer in charge of this department had a similar case in the City Hospital in a negro girl, 18 years of age, dying of tubercular meningitis; the kidneys were of normal size, each possessing a double pelvis with ureter for each, and each ureter emptying into the bladder by a separate opening.

PRIMARY CARCINOMA OF THE PROSTATE.

George W. Hawley, June Annals of Surgery, thinks carcinoma of the prostate to be more common than formerly believed, and that a radical cure is possible in early cases, consequently we should entertain a closer scrutiny and obtain a more comprehensive and definite picture of this oft over-looked disorder. He believes the disease to be overlooked during life and at necropsy, the latter due to the demonstrated fact that carcinoma of the prostate is often extremely difficult of post-mortem diagnosis without the aid of the microscope. Heimann in 20,544 cancer cases recorded in Germany during the two years 1895-96, reports thirty-four as occurring in the prostate (8127 male)—a ratio of 4.18 per mille. In the Urogenital clinics Engelbach in 1898 found during nine months, four cases of carcinoma of the prostate out of 700 patients; Burckhardt found fifteen out of 1673 genito-urinary cases; Oraison reports twenty-eight of cancer among 306 "prostatics." As a rule cancer of the prostate is primary, and secondary involvement rare. Cancer occurs in the hypertrophied prostate in from 5 to 10 per cent. of cases, and is extremely rare in the atrophied prostate, rarely occurring before the 50th year. Prostatic cancer tends not to regional extension nor to ulceration; metastasis

to the lymph glands is not as common as elsewhere, but, on the other hand is exceedingly frequent to the bones and quite general throughout the skeleton. Early detection is dependent upon three not wholly satisfactory phenomena, and these three alone, to-wit: Pain in or about the prostate; area of hardness and nodosity palpable from the rectum, so-called "stony hardness;" and tenderness. Forty years of operative experience has so uniformly recorded failure that a stigma had been placed upon surgical intervention, due to the fact that excision of mature malignant tumors can rarely, if ever, be complete. The reports today are more promising and Oraison's report of twenty-three perineal prostatectomies for cancer shows that early operation should be curative; ten of these remained cured after more than four years; in three only was there recurrence; six others recovered but were lost sight of; the remaining four died from the operation. The radical operation should prescribe liberal perineal exposure of the prostate with preliminary exploration of the bladder and preprostatic structures, and total intracapsular enucleation-urethraprostatectomy.

SKIN GRAFTING INFECTED AREAS.

Sidney F. Wilcox, May Annals of Surgery, gives the following method of preparing for skin-grafting, areas, which have become infected, and from which pus exudes. The night before the operation the ulcerating and surrounding area should be cleansed as thoroughly as possible with green soap and hydrogen peroxide to remove the dried crusts and debris from the granulations. In case of very foul ulcers more time may be taken, and a compress wet with 50 per cent. solution of peroxide may be applied for a few days until the exudate is removed. After cleansing, the raw surface is covered with a compress saturated with a 1 per cent. solution of formaldehyde (the ordinary 40 per cent. preparation being the unit), and this compress is allowed to remain in place until the patient is on the operating table. When the compress is removed it will be found that the granulation layer is dry and dark red in color, having an appearance much like smoked beef. The layer is about a quarter of an inch in depth; it is friable, and can be easily scraped off from the underlying tissue with a sharp spoon. The removal of the granulation layer should be thorough, and what little oozing there is can easily be stopped by the application of the Esmarch solid rubber band for a few min-

utes; the smooth rubber makes equable compression, does not stick to the tissues, and leaves an ideal surface for skin-grafting. The remainder of the operation is the ordinary one for the application of Thiersch's grafts. The after-treatment is the same.

CASTRATION FOR TUBERCULOSIS OF THE TESTICLE.

Charles Greene Cumston in the June issue of the *American Journal of the Medical Sciences* reviews the voluminous and somewhat contradictory literature on the subject and discusses the various operations for the relief of this condition. He disagrees with the advocates of the conservative operation, advising total removal of the testicle with high resection of the cord under visual inspection, pointing out the danger of evulsion of cord and calling attention to the experience of Lauenstein and Hilferich, both having extensive hemorrhage into the pelvic tissue as a result of traction on the vas. He quotes the views of Koenig, Kocher, Southam, Simon, and others that infection of the prostate and urinary organs is no contraindication to castration, for the reason that the removal of the tuberculous testicle has a favorable action on the disease when located in other parts of the genito-urinary system, as well as upon the general condition of the patient. He says that, while, if the prostate or seminal vesicle be involved also, it can not be denied that simple removal of the diseased testicle exerts a favorable influence, it must also be stated that the prognosis is insecure, especially when the tuberculous process in the organ is well advanced, consequently simple castration must be considered insufficient; in these cases he advises removal of the diseased portions of prostate and vesicle, suggesting a method of attack, using the sacral route, according to the method of Kraske for resection of the rectum, in preference to the perineal route of Zuckerkandl. He mentions the efforts of Bardenheuer and Rasumowski to remove the diseased area in the vas or epididymis and then to preserve the function of the gland by suturing the mucous membrane and other coats of the duct together, thus ingeniously endeavoring to provide an excretory duct for the remaining gland structure. Koenig, Kocher, Gussenbauer, and Vun Bruns take the view that the infection is a descending one, consequently a secondary condition, and nothing short of a complete castration affords any prospect of a cure. Conservative surgery applied to a tubercular testicle is practically useless.

PRIMARY CHOLECYSTECTOMY; SCOPE, METHOD AND RESULTS.

Howard Lilienthal, *July Annals of Surgery*, gives his experience with 42 primary operations of this character. The indications for the operation are: first, serious injuries of the gall-bladder; second, grave diseases of the gall-bladder, such as suppuration, atrophy, and cancer; third, repeated or complicating gall-stone disease; fourth, obliteration of the cystic duct.

Practically all agree that ulceration and gangrene are indications for its removal, but Ochsner says: "It is not wise to operate during the acute stage of cholecystitis," an opinion not verified clinically by the writer. The conclusion of the writer is that the operation is a safe one, and that it is far more satisfactory in suppurative, calculous, and atrophic conditions than cholecystostomy. In those cases in which infection of the bile passages is present he advocates the removal of the gall-bladder as well as in those cases in which there is no infection, in the former cases draining the bile passages by means of a tube in the hepatic duct, in the latter the natural drainage into the intestine is all that is required. He meets Richardson's objection, saying that the drainage of the biliary passages by tube at one sitting with a cholecystectomy is far from difficult, and is extremely satisfactory; that the operation is not as dangerous as thought, since his mortality in diseases of the biliary passages has fallen materially since he has adopted cholecystectomy as a primary operation; that redrainage of the biliary passages would be extremely difficult and dangerous, but that in his experience he had never found it necessary to redrain. Secondary operations have not infrequently been necessary after cholecystostomy, while none had been required in any of his patients who had been discharged after a cholecystectomy. His list comprises 42 cases, twenty-nine being operated upon during the progress of acute, active infection and thirteen in the latent or chronic stage of infection. Ten were males, thirty-two were females, the oldest being a man of sixty-eight, with acute calculous cholecystitis and empyema of the gall-bladder, the youngest, a girl of eleven years old, who had suffered for years with cholelithiasis. A history of antecedent typhoid was obtained in eight cases (19 per cent.). There was gangrene of the viscus, more or less extensive, in seven of the cases. Choledochotomy was performed six times together with cholecystectomy. Marked jaun-

dice was present in fourteen of the patients. Drainage of the hepatic duct was practised twice. The most noteworthy complication has been a bronchopneumonia, usually on the right side; it was encountered five times. There has been one death, it being due to a streptococcus infection which existed before operation. The contraindications to cholecystectomy up to the present writing are: first, extensive cacinaoma with involvement of neighboring viscera; second, cholecystitis with large perforations and pericholecystic abscesses, so that on entering the abscess with the finger one at the same time enters the gall-bladder; third, in cases of known hemorrhagic tendency; fourth, in obviously moribund patients.

SUBCUTANEOUS INJECTIONS OF MERCURY FOR SYPHILIS.

Louis Julien, Vol. IV International Clinics, reviews his experience with mercurial injections in the treatment of syphilis extending over a period of 25 years. Subcutaneous injections are his favorite remedies because of the regularity of their effect and the promptness of their action which can be depended on in every case. He has used the bichloride in doses of 1-15th grain, dissolved in 30 minims of water, subcutaneously in hundreds of cases without complaint on the part of the patient. He considers dangerous the injection of large doses of bichloride in serum as advised by some specialists. The insoluble compounds of mercury are probably the best; an astonishing feature about the use of the insoluble compounds is the rapidity with which the system becomes saturated with mercury, it having been shown that within a few hours after the injection mercury can be demonstrated in the milk, and furthermore, for several weeks at least the substance continues to be absorbed into the system, and sometimes after a month the absorptive process is still going on. For routine usage the dose of calomel should be about one grain for a medium sized person, 120 pounds, increasing the dose with size. When calomel is used with antiseptic precautions the danger of abscess formation is practically nothing, the author having had only two in his experience, both depending on accidents to the injection area, through violence received after the injection was made. The first three or four injections are to be given at intervals of eight days, then ten, then twelve, then fifteen, and finally once a month. first three or four injections are to be given

in all cases, but those which demand a rapid and intense therapeutic effect. One important use of mercurial injections is for the rapid diagnosis of syphilis in cases in which there is question of operative interference if the condition should prove not to be syphilitic. The diagnosis can be absolutely decided in a few days, and in cases in which no effect is produced, showing that syphilis is not present. absolutely no harm has been done, and the operation may be undertaken without any fear of complications ensuing as a consequence of the use of the calomel. He also believes an important indication to be in the very beginning of syphilis with the idea of producing an abortive effect upon the disease, thereby breaking in upon the course of the disease, rendering its manifestations much less serious, and distinctly retarding the stages of the disease in their evolution. In addition to calomel he uses the salicylate of mercury and Gray oil, exhibiting the calomel when he wants a rapid and powerful action, reserving the latter two for slower action without danger of intoxication. He believes that the use of mercury should be continued for at least five or six years after the acquirement of syphilis, and that the patient should not pass from the observation of his physician for some years more. The use of mercury occasionally, even during the subsequent years, may be of advantage in preventing the development of serious nervous symptoms, and, when in later life the man feels depressed or overborne because of manifold duties, mercury will often be found to be the best tonic for his condition, even when there are no direct symptoms of his syphilis present.

SUTURE OF THE BRACHIAL ARTERY.

Gaston Torrance, July Annals of Surgery, reports case of injury to arm followed by sloughing and ulceration, resulting in an opening, of the size of point of lead pencil, in brachial artery, through which the blood was forced out at each pulse-beat. The hemorrhage being controlled by pressure above, the opening in artery was closed by a purse-string suture of fine silk, a bit of muscle was grafted over arterial wound and arm dressed in right-angled splint. In five hours the pulse beat was as strong in the injured arm as in the healthy one, convalescence thereafter being uneventful, the patient securing an arm with good function.

ANKYLOSTOMIASIS.

(The Lancet, May 21, 1904.)

J. Chronnell notes that when this disease is once introduced into collieries it is very difficult to eradicate. The symptoms are those of a severe form of anaemia. In addition, in Cornwall, the author's district, an irritable pustular skin eruption known as the "bunches" is not uncommon. The common tenicide used has been thymol. The author makes a plea for better sanitation in collieries.

TREATMENT OF SKIN DISEASES WITH THE X-RAYS.

Muller reports on the employment of this agent in pruritus, hyperidrosis, and chronic eczema. By the use of moderately soft or even very soft tubes he obtained excellent results, but does not consider it wise to apply the method indiscriminately in these diseases without having tried other procedures. A case of pruritus vulvae of long standing which had resisted other treatment was entirely cured after five exposures. In the case of profuse sweating of the hands, the exposures were followed by an exfoliation of the skin, and from the new dermal covering this excessive perspiration was absent. Another patient with this condition in the anal region was also favorably affected. The cases of chronic eczema were freed from the itching and the indurated skin after a few exposures. (*Munchener medizinische Wochenschrift*, June 7, 1904.)

THE VIRULENCE OF HUMAN AND BOVINE TUBERCLE BACILLI FOR GUINEAPIGS AND RABBITS.

M. Dorset summarizes the work which has in part appeared in previous medical literature. The experiments are given in detail, a medium consisting of the mixed whites and yolks of hens' eggs being used for the isolation and propagation of all cultures. At least 10 human cultures, of varying virulence, were used. The comparative cultural characteristics and the animal findings are detailed. As a result, it is stated that the following general conclusions seem unavoidable: 1. Certain tubercle bacilli of human origin are indistinguishable either culturally, morphologically, or with regard to their virulence for rabbits and guinea pigs from certain tubercle bacilli of bovine origin. 2. There is considerable variation in the virulence of human tubercle bacilli for rabbits and guineapigs. Dorset believes that in human and bovine tubercu-

losis we have to do with organisms differing usually in virulence, but between which there is no other essential distinction. He also states that until we know what influence a residence in the human body exerts upon bovine tubercle bacilli we cannot determine accurately the proportion of cases of human tuberculosis that result from infection from cattle. A more detailed study of tubercle bacilli derived from accidental inoculation of men with bovine virus is needed, and also further examination of bovine bacilli derived directly from cattle.—Deut. Arch. f. Klin. Med. Bd. LXXIX P. 125.

ABSORPTION OF NUTRIENT ENEMAS CONTAINING PEPTONE AND PEPTONE-ALCOHOL.

To determine the relative value of the varieties of nutrient enemas mentioned above, A. Bial experimented upon himself. For two days he dieted himself in such a manner as to produce well-formed soft stools. On the third day, after thorough cleansing of the bowel, three portions of a 10 per cent watery peptone solution were injected at intervals of seven hours. Two weeks later a similar experiment was made with enemas containing 10 per cent peptone and 10 per cent alcohol. Chemic examination of the stools evacuated after each of the experiments revealed that of the pure peptone enema, 50.5 per cent of the peptone was absorbed, while of the peptone-alcohol enema, 66.01 per cent of the peptone was taken up. The nutritive value of the latter is 475 calories greater than of the former, an amount which must be considered of great value in an individual suffering from inanition. (*Archiv f. Verdauung Krank* IX, 433.)

KENTUCKY NOTES.

Dr. Adolph O. Pfingst, who has held the Chair of Histology and Physiology in the Louisville Medical College for the past nine years, has resigned that position and has accepted a Chair in the Kentucky University in the special departments of the eye, ear, nose and throat.

Judge Upton W. Muir, of Louisville, while bathing at Cape May on July 20th, made a dive in shallow water into an oncoming "comber" and was not again seen alive. His body was found floating in one foot of water fifteen minutes later, life being extinct. Post-mortem examination disclosed the fact that the bridge of the nose was broken and that the neck had been dislocated. Evidently the depth of the

oncoming wave had been miscalculated and the nose and forehead struck the ocean bed with the head flexed, in this way producing the injury. The case is very unusual and possibly unique.

COUNTY SOCIETIES.

Secretaries of county societies are requested to furnish for this column, and without further notice, all county society news of interest, such as the date and place of the monthly meeting, notices of death and marriage, epidemic disease, and, in fact, everything which might be of interest to brother practitioners in the State.

The Barren County Medical Society met in the Court House in Glasgow, on July 5th, Dr. J. S. Leech, vice-president, presiding. Dr. R. E. Garnett was chosen to act as secretary in place of the regular secretary, who was absent.

Dr. W. T. Britt, of Temple Hill, reported a case of labor which occurred normally in a woman who had been in perfect health and condition during her entire term of pregnancy. Labor short and easy, but the child still-born. Query: What was the cause of death of child? This was discussed at length by Drs. Taylor, Jepson and Leech. Dr. J. S. Leech reported a curious case of haematoma (?) in child four days old, resulting in the death of child the sixth day. Labor was a little slow from inefficiency of pains, but nothing abnormal about child until the fourth day, when these tumors appeared on each side of the head at the junction of frontal and parietal bones near the center on either side. Two cases of labor two weeks after escape of liquor amnii, with no bad effect on child, reported—one by Dr. F. J. Taylor and one by Dr. R. E. Garnett.

Dr. W. T. Britt and Dr. F. J. Taylor volunteered to read papers at our next meeting, the one on "Typhoid Fever," the other on "What I Have Learned in Forty Years of Practice of Medicine."

Drs. F. J. Taylor, J. J. Jepson and R. E. Garnett were appointed a committee to draft suitable resolutions on the death of Dr. W. E. Garnett, who was a valued member of our society. Acting secretary was directed to forward minutes to the *Kentucky Medical Journal*. On motion the meeting adjourned to meet on the first Tuesday in August at 10 o'clock a. m.

R. E. GARNETT,
Secretary pro tem.

According to its established policy and in order to promote good fellowship, the *Bourbon County Medical Society* held its July

meeting on the first Thursday, with Dr. J. W. Ferguson at Shawhan, where the following program had been arranged:

"Treatment of Fracture of the Hip in the Aged," by Dr. S. J. Anderson, Clintonville. Discussed by Dr. A. C. Wilmott, of Hutchison.

"Abortion and its Treatment," by Dr. J. S. Wallingford, Paris. Discussed by Dr. Wm. Kenney, Paris.

"Beri-Beri as seen in the Philippine Islands," by Dr. Julius M. Purnell, Assistant Surgeon U. S. A., Manila, P. I. Discussed by Dr. D. B. Anderson, Paris.

After a very profitable discussion of the papers by those present the society was entertained at six o'clock dinner by Dr. and Mrs. J. W. Ferguson, the delectable bird of the season "spring chicken" furnishing the "*piece de resistance*."

The society will go on another chicken hunting expedition, when that prince of good fellows and royal host, Dr. W. M. Miller, of Millersburg, will entertain the society on the second Thursday in August. The following program will then be rendered:

"Summer Diarrhea in Infancy," Dr. T. L. Lapsley. Discussed by Dr. C. B. Smith, of Millersburg.

"Puerperal Septicaemia," Dr. J. W. Ferguson, Shawhan. Discussed by Dr. F. Fithian, Paris.

"Post-partum Hemorrhage," Dr. W. M. Miller, Millersburg. Discussed by Dr. W. G. Dailey, Millersburg.

C. G. DOUGHERTY, Secretary.

The Green County Medical Society met Thursday, July 7, 1904, to elect officers. Dr. W. J. Risen, of Summersville, was elected president; Dr. E. L. Thompson, of Pierce, vice-president; Dr. B. M. Taylor, of Greensburg, secretary.

The members are becoming enthusiastic and an interesting program was arranged for the next meeting in September. There are only four physicians in the county who are not members of the society and we hope soon to secure these.

B. M. TAYLOR,
Secretary.

The regular monthly meeting of the *Hardin County Medical Society* was held in the court house at Elizabethtown, Ky., Thursday, July 14th, 1904. The meeting was called to order by the President, Dr. J. W. O'Connor. Fourteen members and two visitors were present.

The morning session was consumed in hearing reports of cases and discussing "Proprietary Medicines."

At the afternoon session Dr. J. M. English read a paper on "Electricity and Massage versus Osteopathy."

Dr. D. C. Bowen read a paper on "Acute Intestinal Diseases of Summer."

After the papers were thoroughly discussed, the President appointed Drs. J. W. Shacklet and C. W. Rogers to read papers at the September meeting; they to select their subjects.

The society adjourned to meet jointly with the Muldraugh Hill Medical Society at Elizabethtown, Thursday, August 11th, 1904. Neighboring doctors are invited.

H. R. Nusz, Sec'y.

The Harrison County Medical Society met July 4th at Cynthiana, with Dr. Tod Smiser. Most of the members of the society were present.

Dr. Rufus B. Hall, of Cincinnati, was present, and read a paper entitled "Some Clinical Reasons for Advising Early Operations for Fibroid Tumors of the Uterus." The paper was freely discussed by various members of the society.

The following resolution was adopted:

"Resolved, That the Harrison County Medical Society make the Kentucky Medical Journal its official organ, and that the transactions be submitted to said Journal for publication."

Dr. L. T. Echler made application for membership.

The society then adjourned for lunch, to meet the first Monday evening in October.

J. N. REES, Secretary.

The Muhlenberg County Medical Society met at Greenville July 13th, with the following physicians present: Dr. E. R. Yost, president; Drs. J. H. Smith, H. C. Kennerley, J. M. Ferguson, G. H. Bohannon, J. W. Koontz, A. Lewis, Dudley Woodburn and C. E. O'Bryan. The brothers who were appointed to prepare papers were absent from some cause.

After attending to the regular order of business the remainder of the time was devoted to social features. Drs. Dudley Woodburn and L. Bennett, of Central City, Ky., were appointed to prepare papers on "Dysentery" for the next meeting, which will be held at Central City, August 10th, 1904.

C. E. O'BRYAN, Secretary.

The Scott County Medical Society met at the City Hall, Georgetown, on June 2nd, 1904,

Dr. William H. Coffman presiding. An interesting paper on "Summer Diarrhea" was read by Dr. A. B. Coons, of Newtown. Discussion by Drs. F. H. Daugherty, D. B. Knox, E. A. Anderson and W. H. Coffman.

The next meeting will be held at the City Hall on August 4th, at 10 a. m., at which Dr. D. B. Knox will read a paper on "Malarial Poison," and Dr. C. J. Graves, one on "Dysentery."

I am pleased to say quite an interest was manifested as to the future of the society. Five new members were received, besides one transferred from Henry County, and others are expected at the next meeting. The new members are Drs. W. D. Scott, C. J. Graves, F. C. Collins, J. W. Davis, Wm. G. Moore and P. H. Crutchfield, the latter transferred from Henry County.

JOHN E. PACK, Secretary.

The Hickman County Medical Society convened at Clinton, Ky., July 7th, 1904. There was an unusually large attendance and quite a number of interesting papers read, with discussions from all present. Those present were: Drs. R. S. Killough, W. W. Richmond, J. A. Farabough, J. R. Scarborough, J. M. Beeler, Charles Hunt, T. S. Whayne, W. T. Craig, W. R. Moss and E. B. McMorries. The following officers were elected: President, Charles Hunt; vice-president, J. M. Beeler; secretary-treasurer, E. B. McMorries.

The Henry County Medical Society met on Monday, July 25, its regular meeting day, with Drs. W. F. Coblin, W. L. Nuttall, F. J. Yeager, A. M. Zaring, O. P. Chapman and C. R. Martin present. The afternoon was taken up discussing clinical cases. Several talks were made for the good of the society, and it was unanimously voted that the Kentucky Medical Journal be adopted as the official organ of the society and that every support possible would be given to render it successful.

The following papers will be read at the next meeting:

"Urinalysis," by Dr. R. W. Porter, Port Royal.

"Neurasthenia," by Dr. J. C. Cassity, Eminence.

"Scarlet Fever," by Dr. A. H. Kluser, Eminence.

JOHN P. NUTTALL, Secretary.

The Knox County Medical Society met in regular session June 27th at the office of Drs.

Herndon & Anderson, in Barboursville, Ky. The meeting was well attended and was called to order by President G. H. Albright. After reading and adoption of the minutes of the last meeting, a report of some interesting clinical cases was listened to by the society. The paper of the day was read by Dr. G. H. Albright, who took for his subject "Syphilis." He gave to the society a most entertaining, as well as edifying treatise, which elicited quite a

considerable discussion among the various members present.

On motion of Dr. Heath, the secretary was instructed to send proceedings of each meeting to the State Secretary and the Journal of the State Association was recognized as the official organ of the society. After reading the program for the next meeting the society adjourned.

V. V. ANDERSON,
Secretary.

GRADUATE NURSES' REGISTER.

NAME.	DATE AND PLACE OF GRADUATION.	ADDRESS.	TELEPHONE.
MISS LUCILLE ALLEN	1901—Good Samaritan Hosp., Cincinnati.	Richmond, Ky.	
MISS S. TANNER ANDERSON	1900—Norton Infirmary, Louisville	3121 Brook, Louisville	{ C. 1288 H. 1283
MISS MARY A. ALEXANDER	1891—Louisville City Hospital	603 W. Oak, Louisville	{ C. 490 H. 1541
MISS T. ALLOWAY	1903—Louisville City Hospital	108 E. Broadway, Louisville	{ C. 929 H. 1541
MISS HARRIET BALZHEISER	1899—Good Samaritan Hosp., Lexington.	146 South Upper, Lexington, Ky.	{ H. 685 C. 968
MISS BEARD	1896—Louisville City Hospital	121 E. Kentucky, Louisville, Ky.	{ C. 968 H. 1541
(Graduate in Massage and Medical Gymnastics.)			
MISS IDA BECKMAN	1896—Jennie Casseday Infirm., Lou'ville.	1828 Baxter Ave., Louisville	{ C. 871y H. 1541
MISS VIOLA J. BINES	1898—Louisville City Hospital	603 W. Oak, Louisville	{ C. 490 H. 1541
MISS MAY BELL BOWYER	1896—Louisville City Hospital	Richmond, Ky.	{ C. 490 H. 1541
MISS GERTRUDE BRESLIN	1896—Norton Infirmary, Louisville	421 W. Chestnut, Louisville	{ C. 1684 H. 587
MISS MARGARET BRIDGERS	1892—Louisville City Hospital	1434 Sixth, Louisville	{ C. 512 H. 1922
MISS EDITH EDWARDS BUSH	1902—Norton Infirmary, Louisville	218 E. Broadway, Louisville	{ H. 490 H. 1541
MISS L. C. BUSCH	1899—Gray Street Infirmary, Louisville	117 W. St. Catherine, Louisville	{ H. 1922 H. 490
MISS SUE D. CADEN	1902—Good Samaritan Hosp., Lexington.	Box 217, Lexington, Ky.	{ H. 1541 C. 929
MISS M. CAMERON	1894—Philadelphia Hospital	108 E. Broadway, Louisville	{ H. 1541 C. 929
MISS B. CAMERON	1896—Philadelphia Hospital	108 E. Broadway, Louisville	{ C. 929 C. 1640
MISS EMMA L. CARTWRIGHT	1902—Norton Infirmary, Louisville	842 Cawthon, Louisville	{ H. 3131 H. 5487
MISS NANCY COCKRILL	1900—Norton Infirmary, Louisville	Supt. University Hospital, Louisville	{ H. 3131 H. 5487
MISS NANCY CONNOUGHTON	1903—University Hospital, Louisville	1432 W. Broadway, Louisville	{ C. 1271 C. 643
MISS ANNIE B. COOK	1900—Norton Infirmary, Louisville	326 Twenty-first, Louisville	{ H. 874 C. 64028
MISS KATHERINE DEAR	1896—Norton Infirmary, Louisville	934 Second, Louisville	{ C. 643 H. 874
MISS ELIZABETH M. DENNIE	1903—Chester Hospital, Penn	1016 Fourth Avenue, Louisville	{ C. 643 C. 64028
MISS BESSIE DESHA	1903—Good Samaritan Hosp., Lexington.	177 S. Upper, Lexington, Ky.	{ H. 874 C. 64028
MISS DOCK	1892—Philadelphia Hospital	1016 Fourth Ave., Louisville	{ C. 64028 C. 1880
MISS MARION DOWNS	1901—Norton Infirmary, Louisville	223 E. College, Louisville	{ C. 1880 H. 1788
MISS FRANCES EUBANKS	1902—Good Samaritan Hosp., Lexington.	175 N. Broadway, Lexington, Ky.	{ H. 1788 H. 2883
MRS. NANNIE McD. EUSTAPHIEVE	1903—Norton Infirmary, Louisville	1810 Sixth, Louisville	{ H. 2883 H. 4161
MISS MAMIE H. FIELD	1903—University Hospital, Louisville	920 Sixth, Louisville	{ H. 4161 H. 705
MISS LULA FRILY	1900—Good Samaritan Hosp., Lexington.	18 Park Place, Lexington, Ky.	{ H. 705 C. 1216
MISS IDA S. GARDNER	1897—Norton Infirmary, Louisville	222 East Broadway, Louisville	{ C. 1216 H. 1541
MISS JENNIE GIDEON	1899—Louisville City Hospital	121 E. College, Louisville	{ H. 1541 C. 929
MISS MINNIE H. GILCHRIST	{ 1892—Norton Infirmary, Louisville 1893—Children's Free Hosp., Louisville	{ 437 E. Broadway, Louisville 216 Bailey Ave., Louisville	{ C. 929 H. 5795
MISS DOROTHY FOSTER GILMORE	1902—Norton Infirmary, Louisville	216 Bailey Ave., Louisville	{ H. 5795 H. 5795
MISS FRANCES GILMORE	1903—Gray Street Infirmary, Louisville	216 Bailey Ave., Louisville	{ H. 5795 H. 1381
MISS MINNIE B. GOODELL	1897—Louisville City Hospital	Earlington, Ky.	{ H. 1381 H. 4150
MISS GRACE HAMBRICK	1898—Good Samaritan Hosp., Lexington.	545 E. Main, Lexington, Ky.	{ H. 4150 C. 490
MISS LIZZIE R. HAND	1895—Norton Infirmary, Louisville	2519 W. Market, Louisville	{ C. 490 H. 1585
MISS MARY L. HARBISON	1898—Louisville City Hospital	603 W. Oak, Louisville	{ H. 1585 H. 6222
MISS NANCY HARRIS	1903—Good Samaritan Hosp., Lexington.	310 W. High, Lexington, Ky.	{ H. 6222 H. 824
MISS MARY HARRIS	1903—University Hospital, Louisville	No. 7 Jefferson Terrace, Louisville	{ H. 824 H. 824
MISS S. HAYDEN	1900—Good Samaritan Hosp., Lexington.	812 W. Maxwell, Lexington, Ky.	{ H. 824 H. 5492
MISS NANNIE HEAD	1900—Good Samaritan Hosp., Lexington.	812 W. Maxwell, Lexington, Ky.	{ H. 5492 H. 1002
MISS E. B. HERBERT	1903—University Hospital, Louisville	752 Third, Louisville	{ H. 1002 H. 1541
MISS B. M. HUGHES	1896—Good Samaritan Hosp., Lexington.	510 N. Broadway, Lexington, Ky.	{ C. 929 H. 1541
MISS IDA HULETTE	1903—Louisville City Hospital	108 E. Broadway, Louisville	{ C. 929 H. 1381
MISS LOU HURLY	1901—Good Samaritan Hosp., Lexington.	545 E. Main, Lexington, Ky.	{ H. 1381 C. 2860
MISS EMMA ISAACS	1897—Norton Infirmary, Louisville	1302 W. Broadway, Louisville	{ C. 2860 C. 512
MISS VIOLET T. JOYCE	1902—Norton Infirmary, Louisville	218 E. Broadway, Louisville	{ C. 512 C. 512
MISS DAISY B. JOYCE	1902—Norton Infirmary, Louisville	218 E. Broadway, Louisville	{ C. 512 C. 3696
MISS FRANCES L. LONG	1899—Norton Infirmary, Louisville	730 Second, Louisville, Ky.	{ C. 3696 H.
MISS BERNICE MARTIN	1901—Good Samaritan Hosp., Lexington.	40 Barr, Lexington, Ky.	{ H. H. 605
MISS MARY MCCANN	1898—Good Samaritan Hosp., Lexington.	371 S. Upper, Lexington, Ky.	{ H. 605 C. 643
MISS AGNES McNALLY	1903—Chester Hospital, Penn	1016 Fourth Avenue Louisville	{ C. 643 C. 1131
MISS PATTIE MCPHERSON	1896—Louisville City Hospital	115 W. Chestnut, Louisville	{ H. 5802 H. 1612
MISS LAURA MEYERS	1904—University Hospital, Louisville	901 Eighth, Louisville	{ H. 1612 H. 874
MISS A. A. MILWARD	—Norton Infirmary, Louisville	545 E. Main, Lexington, Ky.	{ H. 874 T. 1341
MISS BEATRICE MOORE	1902—Good Samaritan Hosp., Lexington.	177 S. Upper, Lexington, Ky.	{ T. 1341 (both) 650
MISS ELIZABETH MORTON	1903—Good Samaritan Hosp., Lexington.	182 E. Sixth, Lexington, Ky.	{ (both) 650 C. 3771
MISS HALLIE E. MOSBY	1897—Norton Infirmary, Louisville	104 E. Broadway, Louisville	{ C. 3771 H. 217
MISS KATHERINE O'CONNOR	1899—Norton Infirmary, Louisville	421 W. Chestnut, Louisville	{ C. 929 C. 1967
MISS JO O'CONNOR	1896—Louisville City Hospital	108 E. Broadway, Louisville	{ H. 217 H. 886
MISS MAUDE PECAR	1901—Norton Infirmary, Louisville	1166 8 th th, Louisville	{ H. 886 (both) 714
MISS SUSAN BELLE PORTER	1899—Kingston Gen'l Hospital, Ontario.	Norton Infirmary	{ (both) 714 H. 217
MISS ANNIE REECE	1842—Norton Infirmary, Louisville	805 W. Chestnut, Louisville	{ H. 217 C. 929
MISS V. G. RELF	1889—Norton Infirmary, Louisville	108 E. Broadway, Louisville	{ C. 929 H. 3371
MISS EMILY B. RICHARDSON	1902—Gray Street Infirmary, Louisville	1022 Second, Louisville	{ H. 3371 H. 2182
MISS GRACE ROBERTSON	1901—Kingston Gen'l Hospital, Ontario	210 W. Oak, Louisville	{ H. 2182 H. 1349
MISS E. F. SHAWNER	1900—Good Samaritan Hosp., Lexington.	431 N. Lime, Lexington, Ky.	{ H. 1349 H. 217
MISS C. SHOEMAKER	1899—Louisville City Hospital	108 E. Broadway, Louisville	{ H. 217 C. 929
MISS LILLIAN SMITH	1902—Good Samaritan Hosp., Lexington.	Kentucky Ave., Lexington, Ky.	{ T. 1836 H. 4535
MISS MATTIE I. STEILBERG	1898—Louisville City Hospital	2225 Magazine, Louisville	{ H. 4535 H. 1469
MISS CARRIE STOWERS	1901—Good Samaritan Hosp., Lexington.	431 N. Lime, Lexington, Ky.	{ H. 1469 H. 1469
MISS PEARL TRUMBO	1901—Good Samaritan Hosp., Lexington.	431 N. Lime, Lexington, Ky.	{ H. 1469 C. 439
MISS BEATRICE YOUNG	1901—McMurtry's Infirmary, Louisville	405 W. Broadway, Louisville	{ C. 439

**SYNONYMS.

"Things which are equal to the same thing, are equal to each other."—Axiom No. 1, p. 19, Davies' Legendre, Edition 1860.

Few physicians know that many of the "new remedies" marketed under fanciful trade names are identical with remedies having dissimilar names, or are old preparations which have been given fancy names in order to create a false market for the thing in question. For the benefit of physicians and pharmacists the following table has been compiled and will be added to as the requisite information is obtained. The information is secured from chemists and from medical and pharmaceutical journals, and is correct in the main. Should any errors creep in they will be corrected as soon as detected. *Until sufficient evidence to the contrary is forthcoming, it must be assumed that there is no question of substitution involved when the pharmacist supplies a given article under any one of its synonymous names.*

Adeps lane hydrosus	{ Anasalpin Lanolin Lanum
Argentum Colloidale	{ Argentum Crede Collargol Colloidal silver
Beta-naphthol benzoate...	{ Benzo-naphthol Benzoyl-beta-naphthol
Beta-naphthol Salicylate..	{ Betol Naphtalol Naphthosalol Salinaptol
Bromacetanilid	{ Antiseptin Asepsin
Bismuth-iodo-subgallate ..	{ Airol Airogen Airoform
Calcium beta-naphthol sulphionate	{ Abrastol Asaprol
Creosote Tannate	{ Creosal Tannosal
Dimethyl-ethyl-carbinol chloral	{ Dormiol Amylene-chloral
Dithymol Diiodid	{ Aristol Annidalin Di Thymol Iodid Di Iodo Dithymol (And several other similar names.)
Epinephrin	{ Adnephrin Adrenalin Adrenamine Adrenol Adrin Hemostatine Suprarenalin
Ethyl chlorid.....	{ Antidolorin Ethylol Kelene Mono-chlor-ethane
Hexamethylene-tetramine.	{ Aminoform Ammonio-formaldehyde Cystamine Cystogen Formin Saliformin Urotropin
"anhydromethylen citrate	{ Helmitol
Levulose	{ Diabetin Fructose Fruit Sugar

Ortho-ethoxy-ana-mono-benzoyl-amido-chinolin..	{ *Benzanalgene *Analgen *Quinalgen
Paraphenetin carbamid...	{ Dulcin Sucrol
Phenyl-dimethyl-parazon (Germ. Pharm.)	{ Analgesin Anodynin Antipyrin Dimethyloxy-quinizol Methozan Phenazon (B. P.) Phenylon Pyrazin Pyrazolin Parodyn Salazolon Sedatin
Phenylacetamide	{ Acetanilid Antifebrin (And several hundreds of trade names for headache powders, etc.)
Phenylmethyl-ketone	{ Acetophenone Hypnone
Plant pepsin	{ Papain Papoid Papayotin Caroid
Salicylic acid ester of quinine	{ Salochinin Saloquinin
Salicylate of Salochinin...	{ Rheumatin
Sodium sulpho-cafeate ...	{ Nasrol Symphoral
Thyroid gland, dried lactose trituration	{ Iodothyrene Thyroidin
Trioxymethylen	{ Paraformaldehyde Paraform Triformol
Abrin—Jequiritin	
Acetyl-salicylic acid—Aspirin	
Aluminum aceto-tartrate—Alsol	
Australian oil Eucalyptus—Flucol	
Bismuth chrysophanat—Dermol	
Bismuth phosphate (soluble)—Bisol	
Bismuth pyrogallate—Helcosol	
Bismuth subgallate—Dermatol	
Bismuth beta-naphtholate—Orphol	
Calcium permanganate—Acerdol	
Calcium salicylate—Colchicin	
Catarin hydrochlorid—Stypticin	
Chloreton, 1 per cent. solution—Aneson	
Creosote carbonat—Creosotal	
Diethylen-diamin—Piperazin	
Dimethyl-xanthine—Theobromine	
Guaiacol carbonate—Duotal	
Laricinic Acid—Agaricin	
Magnesium Dioxid—Biogen	
Oxyquinaseptol—Diaphtherin	
Phenyl-ethyl urethan—Euphorin	
Saccharin—Garanotose	
Subgallate of bismuth—Dermatol	
Sodium chlorate—Oxychlorine	
Sodium beta-naphtholate—Microcidin	
Tang-Kui, Fl. extract—Eumenol	
Trichloroacetic acid, 50 per cent. solution—Aceto-caustic	

*Must be very cautiously used, if at all, for the physiologic action is not fully known, and this chemical is said to have very serious effect upon the heart and nervous system.

**This table of synonyms is copied from the California State Journal of Medicine, by special permission of that Journal.

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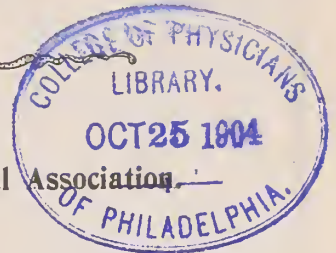
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NO. 4.

IN WHAT PER CENT, IS THE REGULAR PROFESSION RESPONSIBLE FOR CRIMINAL ABORTIONS, AND WHAT IS THE REMEDY?*

By C. J. AUD, CECILIAN, KY.

The Biennial Report of the Kentucky State Board of Health, page 256, Act of 1904, Section 11, reads as follows, "The State Board of Health may refuse to issue the certificate provided for in this act for any of the following causes; to-wit:

Article 2.—"The commission of criminal abortion." From the same page I quote: "The board may suspend or revoke a certificate for any of the causes for which it may refuse to grant a license under the provisions of this act."

From these quotations I infer that the law-makers of Kentucky had reasons leading them to believe that there were persons in, or trying to get into, the medical profession who were guilty of this crime.

I am not prepared to say that this doctor or that doctor is guilty of producing criminal abortion, but I do say that abortions occur far too frequently among those who have conceived without their own or others' desire. In an active practice of over thirty-six years I have been appealed to many times to give drugs or use means to bring about the premature expulsion of the contents of a gravid womb.

I am told by my professional friends that they meet with the same urgent appeals. It seems to be the common experience of those whose aid has been thus sought and refused, to find that after passing into the custody of other so-called professional persons, they would take great pains to call to inform the doctor, who refused his services, that they had "come around alright." A careful inquiry among professional men leads me to believe that only a small per cent of doctors classed as regulars and considered reputable allow themselves to be led into this nefarious practice. The practice is not so common in the country or small towns as in the larger cities. The reasons are many. Those wishing such work done, and who cannot fool some unsuspecting country doctor into giving them something or

performing some unnecessary intra-uterine examination, with a view to bringing about the desired abortion, go to the city where no one knows them and where they may come in contact with the professional abortionist. Then too, there is a feeling of greater safety on the part of all concerned, including the doctor. This paper is not addressed to the professional abortionists but to do good to those who hear it read or may hereafter read it. The essayist presumes and hopes that no one here present is guilty of what he believes to be a most heinous crime: and right here is where our views as to what constitutes crime may differ. I shall not enter into a long dissertation as to when the spirit and the flesh are united to become a living soul. So far as we know the union takes place as soon as the ovum becomes impregnated and is attached to the mother. All the means that may be resorted to for the purpose of bringing about race suicide are revolting to a pure mind, and it is our duty as members of a learned and noble profession to so train ourselves and the public at large that we will abhor such loathsomeness, *ness*.

In my enquiries of a city physician as regards the practice among so-called leading practitioners in large cities, he said: "Yes, it is done by some who are classed among the best. I have a medical friend who told me he had done such work." In answer to the question as to whether or not the abortionist thought he did right, the doctor said: "He had he thought he did right as he did so to save the fair name of a very dear friend." Earnestly I ask you, can any man whose own name is *fair* afford to tarnish *it* to save the name of another already dead to honor? No doubt if a doctor who would resort to such extreme and doubtful means to save a *fair* name of a very *dear* friend were accused of being influenced by a money consideration, he would be very much offended. Even though he receive no fee in that particular case there is a possibility that he desires to have that family and friends so under his control that he may command them at will.

We know that the passions of mankind are insatiate and that we cannot wholly prevent the commission of sin; but we can refuse to become a party to the crime of abortion. Now I say *crime* because the framers of Act 1904, Section 11, Article 2, coolly and deliberately say that abortion is *criminal*. If there lives a doctor with a soul so dead to honor that he

*Read before the Kentucky State Medical Association, Lexington, Ky., May 18, 1904.

cannot appreciate the moral obligations existing between his God, his neighbor and himself, it would be useless, perhaps, to appeal to him as a citizen and ask him to obey the written law.

It being apparent that abuses in the nature of criminal abortion do exist in the profession, it becomes our duty to use all the means in our power to suppress its accomplishment both in and out of the medical profession.

We have two means of prevention which we may bring to bear on the doctor, viz: persuasion and force. Now if there is one in the hearing of my voice who has been so unfortunate as to allow himself to be induced to commit this act, which the statutes of Kentucky say is a *crime*, let me persuade him that the present is ever the best time to cease from doing evil, and turn to doing good.

I will now relate to you an instance in which abortions were cut short in one of the counties of this Commonwealth. The best doctors in the county noticed that abortions were becoming very common and that they were having a great many nasty, dirty wombs to clear of retained secundines, to say nothing of the cases of sepsis. So they assembled together and agreed that each one would watch the next woman seeking an abortion, and see to what doctor she went for aid. An opportunity to watch the miscreant presented itself. A young married woman applied for abortion to a most reputable man who of course refused, but who, true to his promise, called his neighbors together for a conference. He watched to see whose hands she passed into. Sure enough she went to a man who had for some time been under suspicion. About three weeks from that time the woman died suddenly one night and the suspicious party was in attendance. An inquest was sought and a post-mortem obtained, showing that the most bunglesome abortion had been performed, death resulting from hemorrhage and shock.

The doctors tell me that abortions in that county have been unheard of since.

In the same county, and not many weeks later the following case occurred:—a young unmarried woman, accompanied by her mother, who to all appearance was unsuspecting, stepped into the office of a most reputable physician and asked for a private audience. The woman informed the doctor that she had "gotten wet and missed her courses and she also had a dropsy." After kindly and carefully questioning her and making a partial manual examination, the doctor asked to be excused for a few moments, his intention being to step out and call another physician to his assistance. I was the one called. We made sure as to there being a pregnancy, and so informed her. She strenuously denied the possibility of such being the case. We assured her

of our sympathies, and that with the knowledge and consent of her parents we had at our command the best means out of her sorrowful condition. Realizing that we were her true friends she made a clear acknowledgement of her guilt and begged our advice. The mother was called in and informed of her daughter's sad plight.

The first question discussed was as to whether or not marriage were possible. No legal impediments existed, but the parties were first cousins, who, on returning alone from church one dark night, yielded to the promptings of their lustful passions. With spartan courage the girl declared she did not love him, nor did she have any reason to believe he loved her, and she would not ask him to marry her. She was then told of lying-in institutions where she might go during the period of her travail, and there hide her shame from the eyes of the ever curious world, and where, too, her child might be saved, some day, perhaps, to become a useful being. We were not surprised, after her refusal to lay the blame of her sin on others, to have her accept this course out of her troubles. I have since learned that she did go to a lying-in institution, was delivered of a healthy child, returned home and resumed her daily avocations, no one except those concerned and the doctors being the wiser.

The first case related is calculated to strike terror to all the guilty parties and was effectual in the locality in which it occurred. The second narrative illustrates one of the best ways at our command to shield and assist fallen mankind.

I would also warn the medical man against too hasty action in those cases where it is supposed to be necessary to bring about abortion to save the life of the mother.

Some may feign alarming symptoms, and others may really be in what seems a dangerous condition, which if let alone will soon disappear.

This phase of the subject must be acted on by each one of us as seems best, after due deliberations and wise counsel, our object and aim ever being to save rather than sacrifice human life.

What is best to remedy this evil?

The first thing to do is to cultivate a love for right doing within ourselves, and then we are in a position to set a good example and give wholesome advice to others.

We should never hesitate to condemn this crime and lead others to abhor it. I am sure that some do not realize the enormity of this sin. By *others*, I mean not only the professional person but the laity, and our influence should be exerted upon all.

Let us call to our aid the good of all classes of society and by no means let us neglect the

ministry. The minister can use powerful means known best to him, means which he can use most effectually.

In conclusion, I hope that this paper may accomplish the desires of our secretary, who selected the subject for me, and requested that I prepare and read the essay.

Let us all resolve that no matter what may have been the measure of our conduct on this line, that we will return to our homes with a livelier conscience, better armed and equipped to battle as becomes a courageous soldier, against the phalanxes of perdition.

* * * * *

DISCUSSION.

Dr. A. D. Price, Harrodsburg: I did not hear all the paper; nevertheless, I will discuss it, as I have a few thoughts on the subject.

How frequent abortion is, I do not know. That it is of frequent occurrence is known to every medical man. Its evil effects, its destructive tendencies, its great tendency to develop those diseases peculiar to women are all well known to the profession.

Its causes are numerous: Laceration of the cervix, displacements of the uterus, and, especially, syphilis. These are the cases coming legitimately under the physician's care, and these patients are entitled to all the benefits that medical science affords them—nothing more and nothing less. She has a right to demand her health, and the restoration of her physical condition. These are her rights, and her medical attendant should meet the indications to the best of his ability.

But there is another side to the picture. There is criminal abortion being committed every day—the child-life is destroyed, murdered. Criminal abortion is more or less prevalent in every community, and it is not confined to any one class or condition of women. The high and the low, the rich and the poor, the society leader and the servant are on a level.

Some, through fear of child-birth; others who are not willing to multiply and replenish the earth, seek relief through abortion.

There are still others who do not desire their shame to become known, and who take this means of covering it up. They will often go to the members of the profession with cunning statements, in the hope that something may be done, innocently or otherwise, which will give them the relief sought.

This condition cannot be charged to the medical profession.

The criminal abortionists are found everywhere plying their nefarious practice. Every now and then we are called to treat their victims. In all such cases a full investigation should be demanded. If they recover, many of them go through life maimed and diseased, and others sink into an untimely grave.

We know that the abortionist is abroad in the

land; his trail is plainly marked.

If the statements of the victims who have come under my care are true, I could point out some very unworthy members of the profession.

Now I am supposed to tell you how to remedy this condition.

I might simply say that when you catch an abortionist, hang him. This, probably, would be too strong a doctrine to preach, as mistakes would be made. But if we are to accomplish anything in this line, we must find some way of effectually stopping physicians who are engaged in this ignoble business.

Then we should teach these prospective mothers who come to us the great danger they would be put in if this operation is done; that life and health and happiness would be endangered, and, above all, that it is murder. The syphilitic should be instructed not to enter into the marital relation without the advice and consent of his physician.

* * * * *

Dr. J. G. Carpenter, Stanford: From what I have heard, I am convinced that occasionally an abortion is produced inadvertently, by the physician not knowing by the diagnostic touch the type of case he is dealing with, when he resorts to the uterine sound to make his diagnosis of displacement. The medical schools are in a great measure responsible in these cases for not having taught their graduates better.

I think it would have been better if the uterine sound had never been invented. The man who has not the diagnostic touch has no business practicing medicine.

* * * * *

Dr. C. G. Daugherty, Paris: This subject is one of great interest and importance to all of us. We all know that there are criminal abortionists to be found in every community. Some of them are well known. They are unworthy, and should not have any recognition from medical men.

As to the percentage of them, this is a very difficult question to determine, and one which will depend largely upon the opportunity for this class of work. We know the percentage is much larger in the large cities than in the small towns, because one who has been relieved will seek that same source of relief thereafter.

Statistics are very difficult to obtain. The crime is more frequent where there is a small penalty attached to the commission of abortion. I have had some experience where there is a heavy penalty attached to the commission of this crime, but I know from personal experience that abortions are still committed. There is one man who will commit criminal abortion at any time when he thinks it will not become known. I hope the time will come when we can send this man where they all belong.

I suggest as remedy number one, that we take a higher stand; and as remedy number two, that we instruct the people on these points.

If we get cases of this kind, I would suggest that we keep them under treatment until they

have gone so far that it will be dangerous to do anything, and then explain the matter to them.

It would also be a good plan to recommend that they go to a maternity hospital. This will aid the maternity hospital in the work which it is doing, and will at the same time save the poor unfortunate, oftentimes more sinned against than sinning, who can go, and afterwards return to her family without its becoming known.

I am glad that our State has taken the stand that it has in regard to higher medical examinations, but we have not yet gone far enough. I think that in case of death, there should be issued a certificate showing the cause of death, with a penalty attached for falsifying the record. This would give us some statistics which would be important in many ways, and would enable us to know how many deaths were due to abortion. This report might be made to the health officers, or made a matter of record. The law could be so drawn that it would not have to be made public. In this way we would enable the health officers to know who is committing abortions, and how many are being committed.

* * * * *

Dr. D. S. J. Meyers: I would like to say a word about this. This is a subject which affects the young doctor.

There are professional abortionists in all the towns and they do not see their patients through the case. After the abortion is assured, they send the patient away, advising her to send for her regular physician, when she begins to flow.

Now, sometimes, we are innocently accused of being parties to the crime.

I advocate reporting all cases of abortion to the Health Officers, just as you would report a case of smallpox or typhoid fever.

One of the most unpleasant things that has happened to me in the practice of medicine, happened in this wise: I was called to see a young lady who had fainted. I went to call upon her the next day and the father met me at the door with a tube which had been removed from her vagina.

If she had died and my name had gotten into the secular press, you can see how it would have demoralized a young man's practice.

I think the first thing we should do is to make a record of the case, whether the patient be rich or poor. If we do this, we will not be besmirched.

As before stated, the danger lies in the fact that these professional abortionists do not complete their work. In the larger towns you cannot get them to attend to their cases. They leave the rest of the work to be attended to by someone else, and we cannot refuse to go.

* * * * *

Dr. W. H. Wathen, Louisville: I can perhaps add but little to what has been said by the essayist, and by those who have discussed this subject.

There is probably no physician who is so often brought into contact with these cases in single,

and married, as the one who is engaged in pelvic and abdominal surgery, because as a result of pelvic conditions, he is consulted, and then he is made familiar in most cases in professional confidence with the true history of the case; therefore, we know that, while the profession as a class does not countenance, much less produce abortion, yet, there are men who are professional abortionists; and we also know that there are men who are not professional abortionists who will occasionally produce abortion; all these being men who have not the sense of moral duty and responsibility that should tell them that a great wrong is being done, morally, physically, and religiously, in the induction of abortion.

I agree with what has been said in regard to discouraging this practice.

You may be surprised when I tell you that I have been consulted by men high up in the religious world, not only ministers themselves, but a presiding elder over many ministers, who desired to have an abortion produced and who did not apparently realize that there was any great moral or religious wrong in inducing criminal abortion.

I am afraid that the members of the medical profession are often derelict in their duties in relation to induction of abortion.

We are in a large measure responsible, as this condition of affairs would hardly exist if we did our duty in instructing the people about these things. We should also instruct the medical student, and if we will give some attention to enlightening the people, and holding up before the medical profession the evils of this crime, then I think we would see an improvement.

* * * * *

Dr. James B. Bullitt, Louisville: The essayist wrote this able paper at my request, and this paper was requested for a particular reason. I attended a meeting of a District Society a short time ago where the subject of abortion was discussed. It was brought out that this was not an uncommon practice in that community, and that there were respected physicians who habitually made use of the sound for bringing their patients "around." If a woman misses her period, and is becoming anxious, she goes to the physician's office, and he introduces a sound, in the course of his diagnosis.

Dr. Carpenter has called attention to the fact that physicians occasionally innocently produce an abortion in this way.

It is not these that I wish to speak of.

It is those who produce an abortion in this way intentionally.

What I desired particularly to get at was the extent to which the regular profession is responsible. I believe that the worst in the profession are inclined to overstate the percentage; they believe that other men do these things, and by this statement try to exculpate themselves. My practice has not been of the kind to bring me

much in contact with this class of the subject, but I was very much struck with the information which I was able to glean, and it occurred to me that this was one of the most important things to which the medical profession could devote its attention.

The remedy is in sight.

The remedy lies in the elevation of the profession itself. We fall into habits, and simply drift along, and I believe that many a man has scarcely stopped to think that he has committed a grave crime, when he has introduced a sound into a uterus. As I said before, they have drifted along under the belief, perhaps, that other men do this, and this seems to make them think that it is not as bad as it would be if they were the only ones who were doing it.

The remedy, I believe, is to call the attention of the profession to it.

* * * * *

Dr. J. A. Stucky, Lexington: I believe that there is nothing of more importance to come before this meeting than this question, and I arise to endorse all that has been said.

We all know that the abortionist exists, and there be those in these days who believe that the abortionist is a necessary evil.

I think Dr. Wathen hit upon the point of importance when he said that the clergy are in ignorance of the great danger; at the same time, it is not a question of what the clergy may think, but of what the medical profession knows.

I think that the best thing that could be done at this meeting would be to appoint a committee of Ways and Means for the enforcement of the sentiment which has been so overwhelmingly expressed against this practice.

* * * * *

Dr. J. S. Lock, Barbourville: I believe that nearly every one who has spoken has lived in the city. In the country we hardly ever see these cases until sepsis has set in.

There are a large number of women in our part of the country practicing obstetrics, who have no idea of the danger of sepsis, and the necessity of cleanliness.

When we get rid of these so-called midwives, so far as our part of the State is concerned, we will be relieved of a great deal of this trouble.

I cannot recall a single case in our county where we have had an opportunity of tracing a case of abortion, that it has been traced to any reputable physician.

In addition to the midwives we have about twelve quacks who are practicing medicine.

I would be exceedingly glad to have some means suggested by which we can get rid of the incompetent and criminal midwives, with which our country is overrun, also the quacks who are a menace to the laity and a source of annoyance to the physician.

Dr. W. W. Richmond, Clinton: I want to say

that I am pleased with the paper which has just been read.

I want to emphasize one suggestion made by the gentleman who has just spoken with reference to the protection of the physician in attending cases of abortion in unmarried women.

I had an experience two weeks ago myself.

I was called to see a young lady about eighteen years old, unmarried. I was ignorant of her true condition. She had abdominal pain, and I left an anodyne, and called again in a day or two.

The third day I was sent for hurriedly and found that she had had a miscarriage. I was very much surprised to find the condition of things. She had aborted a fetus of about two months.

The mother handed me a little rubber catheter about four inches long, and she wanted to know how that came there. I assured her that I did not put it there.

It was a very serious thing, since I was the only doctor that had been there.

I said that we must see the young lady at once, and I explained to her how serious a matter this was to me, and asked her who put the catheter there. At first she refused to tell, and I told her that if she were to die she would leave her father, mother and myself in a very bad position, and that in justice to her father and mother, and me, she ought to tell about it.

Finally she stated that about four days previously, the young man implicated with her took her in a buggy and brought her to my town, and when she got there she went to a certain place and was blindfolded and carried into a room, where she was met by a man wearing a black mask. She was put on the table and the operation was performed. While the operation was being performed, she slipped up the blindfold, and saw a physician of our city whom she knew, and she said to her father and mother: "It was not Dr. Richmond."

These things fall heavily upon young doctors, and sometimes upon old doctors; therefore, gentlemen, when you are called to attend these cases, it is very important that you get this information from the patient; it is important for your own protection.

* * * * *

Dr. B. L. Bruner, Hardyville: I know that we would all like to talk on this subject, but I think the thing for us to do is to act. It will do no good if we talk without doing something.

I think Dr. Stucky struck the keynote when he said that we could get legislation.

As a member of the legislature two years ago, I introduced an amendment whereby we would be able to punish some of those who do these things. I was surprised to see how little interest was taken in this bill.

Now let us have a committee appointed that will push the matter intelligently, and persistently and see that something is done.

Let us begin at once to prepare, and see that

men are nominated on the tickets of both parties who will support a law which will enable us to put a stop to criminal abortion.

I move that the chair appoint a committee of one from each district to see after this work.

* * * * *

Dr. Louis Frank, Louisville: There are a few things that I would like to say.

First, I do not believe any reputable members of the medical profession are criminal abortionists. I do not believe that the medical profession is as black as it has been painted.

This whole question lies in the home, in the moral education of the man and the woman, and begins in early childhood. Possibly, as long as men and women live on this earth, these things will occur.

If I was called in I would not give testimony compromising a young lady, and I would not put it on record, no matter what the facts were, and I would not "give away" a girl, but would attempt to protect her:

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Dr. C. E. Zimmerman, Newport: I think they should punish the man and the woman who ask the physician to do this work.

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Dr. E. E. Hume, Frankfort: I believe that the gentlemen have taken all sides of the question, except the side of the abortionist.

I believe that we need more education than legislation upon this subject.

In regard to some peoples' opinion upon this subject, I will cite an instance that will illustrate what I am going to say.

Sometime ago a man brought his wife to my office, and said that he was anxious to have her relieved. She was exceedingly anxious. I talked to them about the crime of abortion, and murder. I found, in talking to them, that they were both church members, and I began to preach to them, telling them that this is a life, as soon as impregnation occurs. If it were not, a sloughing process would take place, and it would pass away, and the fact that it does not pass away proves that it is life. I told them that it would be murder to cause an abortion and asked them how they would like to appear before the great King, and find that child in front of them, and its blood dripping from their fingers. I also asked them whether, under these circumstances, they could look up and ask Him to forgive their sins. I told them they ought to ask God to forgive the very thought which they had in their hearts; that they could never hope to be happy again, if they committed murder, especially the murder of their own child.

The woman told me that she would never try to abort again, and said she was glad they had come to me, as they realized now what it was that they were about to do.

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Dr. T. J. Shoemaker, Morganfield: It seems to

me that everyone has talked of the enormity of the crime that is being committed, but no one has touched upon the subject of how the poor girl gets into this condition.

Now, in many of the daily papers, there are advertisements inviting correspondence, promising to tell a great many things, and the young men and boys who put themselves in communication with these people are told that they have a scheme by which they can do whatever they wish with the girls and no harm come of it.

I believe that most of these cases come up from reading the advertisements in the daily papers.

These papers are often found in the hands of children who do not understand what is meant, and as they grow older, they have a curiosity to look into the matter, and see what is meant. These vultures then tell them what a glorious time they can have.

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Dr. Aud, in closing the discussion: I wish to thank the members for their discussion of the paper.

I certainly am in earnest in what I said in the paper, and I think you will find that I have touched upon nearly every phase of the subject. The things I wished most discussed, I said least about.

Concerning this thing of introducing a uterine sound, I would emphasize the necessity of of caution here. Do not introduce a sound, until you are sure that the woman is not pregnant. These women will very frequently try to fool the doctor into making some unnecessary examination, or to do something that will bring about an abortion. The country doctor as well as the city doctor must use great care.

I am, perhaps, fortunate, because I am in the country, and happy. I have never seen the day that I would exchange my place for that of the city doctor.

We should all be careful to do nothing, and to recommend nothing that will do harm.

I am forced to take issue with the one who recommended mob law. I cannot tolerate mob law under any circumstances. We should be law abiding citizens. We should obey the law. We should train our hearts to obey the law. Let us begin this missionary work in our own hearts and in our own consciences.

If there is a man within the hearing of my voice who has a boy that is growing up to become a doctor, let that man clear up his own heart, and then begin on his boy's heart. Then you can go to your brother with advice. As to Dr. Meyer's case, I do not believe that any more forceful remarks have been made.

I will say to the doctor that I am interested in the young men. I have done enough hard work and feel it. I would like to place young men in a position to get along with their work, to get along with their neighbor doctors nicely, and be happy. If anything that I have said will cause one of you to go home encouraged, and determined to do

better and do better in the next twelve months, I will be happy.

Regarding Dr. Richmond's case, there is where a difficult question comes up. Dr. Richmond knows of a crime, and the question is as to just how much he can conceal and not become a party to the crime. I think that it is our duty to keep the secrets of those who have unfortunately fallen, but that doctor did not unfortunately fall. He did it for a reason.

I do not propose to lay down a law, but I hope that at some future time we can have a discussion on the point of just how far we can shield the doctors.

COMMON SENSE IN SURGICAL TECHNIQUE.*

By AP. MORGAN VANCE, M. D., LOUISVILLE, KY.

When asked by the Program Committee for this meeting to contribute a paper, I was at a loss for a title. The multiplicity of articles on every conceivable subject connected with our work rendered it difficult to think of anything that had not been written and rewritten numberless times, by numberless men.

It is now twenty-six years since I began to make and treat wounds, and in this period has occurred more advancement in our knowledge of this subject than in all time before. I look back with amazement at the methods in practice a quarter of a century ago. The only suture and ligature materials were silk, obtained at the saddlers' and waxed before being used, the spool going from case to case—pus-bearing or fresh—until used up. The dressings were obtained from the family, consisting usually of old shirts, sheets, and chemises, everything connected with the operation being conducted along similar lines.

Now, as I feel that I am one of the "old dogs" who has been able to learn new tricks, I have selected the above title. I hope that none of you will feel aggrieved that I discuss the A B C's of the subject, for it is like the boy who set up a row of bricks and by tilting the first one, knocked down the whole row, one after the other. If the A is not right, the Z will certainly show up all wrong; in other words, every link in the chain must be perfectly welded, else when the test is made it will break at one end or in the middle and all our work prove to be for naught. I wish to discuss both ends and the middle and endeavor to impress the lesson of the great care that is needed to insure success. Many men, in discussing this matter, seem to think that the technique of a surgical operation consists in cutting, tying, sewing, etc. It is just as im-

portant for the orderly or nurse to do his part in getting the patient ready for the operation as it is for the surgeon to do his part correctly. All concerned—surgeon, assistant and nurse—need to be chuck-full of the feeling of grave responsibility; in other words, chuck-full of conscience.

The surgeon's work ought to be his religion and after an operation the "still small voice" should have no whisperings, either for him, for his assistant or his nurse. There should be no question as to whether that case of gangrene handled the evening before, or that septic case dressed, has been washed away; or whether there were holes in the gloves with which the dead-house work was done.

When a patient presents upon whom a set operation is to be done, not an emergency case or one requiring particular haste, he or she should be put to bed after a general bath, particular attention being paid to the hair. This bath should be given by a trained attendant, and well given; it should not be like a case recently sent to me for operation after two days' preparation, whose naval looked like the outlet of a coal-mine, but should be a sure-enough hot-water-and-soap scrubbing. When possible this should be repeated for two, better for three days, the patient being confined to a clean bed and a laxative given each night,—not a purge. A purge is sometimes necessary after an operation, but is rarely proper before. All set operations should be done in the morning. After the bath on the evening before the morning of the operation, a soap-poultice should be applied over the operation field, not a poultice of green-soap or German green-soap, but simple white Castile soap in solution, as suggested by McBurney. I am sure the stronger soaps are harmful and productive of trouble later. This soap should be washed off just before starting for the operating room and a plain sterile gauze pad applied. A better plan is to bring the patient directly from the bath-tub to the table, particularly in cases of hernia or operations upon the genitals or rectum. When the patient is on the table after this preparation, there is little to be done before the cutting begins. An alcoholic sponging is all that is needed. Never use a stiff brush; better use none at all on the operation field. If the surgeon be one of the religious kind mentioned above, he has had a full bath on arising—and has changed his ordinary clothing for a white duck suit, including shoes, and given attention to his hands. The latter are supposed to be receiving constant attention during any leisure moments in the course of his waking hours. Hot running water, Sapolio, soap and

*Read before the Kentucky State Medical Association, Lexington, Ky., May, 1904

alcohol are his sheet-anchors in this, the most important of all surgical preparation, and here is where a good brush is absolutely needed. The same precautions apply also to the assistants and nurses.

It is the duty of every assistant, and of every nurse, who takes part in an operation to submit his hands for inspection and to conscientiously report anything which renders them unfit to take part, such as association with anything septic, or that would render them dangerous to the new wound. It is the surgeon's duty to keep his instruments in prime condition at all times; also to provide himself with the best suture material obtainable and get it in shape for sterilization himself, being sure to have all he may need for a given operation. The preparation of instruments after an operation is begun is always bad. His sutures and ligatures should be prepared and ready for use before beginning the operation, otherwise the work will be interrupted to the hazard of the patient. He should be on hand half an hour before the appointed time and get everything ready before the anesthetic is started, thus avoiding hurry and bustle at the last moment.

Catgut is the best suture and ligature material, except in very few cases. Small sizes are best, numbers 00 to 2 covering all sizes that are needed for anything. The knife should be sharp, and scissors also; needles should be in good shape. It is particularly rasping on a man's sense of what is proper to see a surgeon, in preparing for an operation, pull his tools out of an old dirty kit, just about on a par with the lay-out of a plumber who is about to repair a waste-pipe. Still we see this almost daily. The instruments, dressings, sponges, towels and ligatures should come hot from the sterilizer to the several tables prepared for them. The fewer the hands mixed up in this preparation the better. The instruments should be placed near the operator and handled only by him. The needles should be threaded by him and the necessary ligature material prepared and cut ready for use.

I have learned from long experience that catgut is the best suture and ligature material for all operations, with two exceptions. These exceptions are the ligation of the broad ligament and that of the pedicle of the kidney. Even here catgut, properly tied, can be used, particularly on the broad ligament. The field in kidney surgery is so often septic and the pedicle so large, that the silk ligature is safer and to be preferred. It can be easily removed when desired, by a very simple procedure, already described by me. One point in the handling of catgut is of prime importance. After breaking a tube, always pass the catgut through sterile water to rid it of the alcohol, exposing it to the air half an hour before us-

ing, covered of course by a sterile towel; otherwise alcohol necrosis will take place at each stitch. The same is true of the ligature; to use the gut directly from the tube will always get us in trouble.

Van Horn and Sawtel have recently sounded a note of warning with regard to the use of catgut, which is timely and to the point:

"One of the most annoying of the minor accidents of surgery consists in stitch abscesses. These are usually ascribed, and occasionally with truth, to the use of imperfectly sterilized material. It is, however, unfair to attribute them always, or even commonly, to this cause.

"There are three simple sources of infection by the surgeon or his attendants, so insignificant that they may well pass unnoted, and yet any one of them is capable of giving rise to a stitch abscess. These are: 1.—Imperfect sterilization of the eye of the needle, which is apt to escape the full effect of the most rigorous sterilization. 2.—The handling of the catgut with ungloved hands while preparing the sutures. The catgut is fingered, to straighten the folds; the end is, moreover, usually twisted between the finger and thumb before threading the needle. No method of sterilization will entirely rid the hands of micro-organisms. The friction thus used will suffice to infect the catgut. 3.—The impossibility of absolutely sterilizing the patient's skin; consequently, the catgut carries some of the organisms with it and deposits them in the track of the suture.

"It is for the surgeon to find a way of eliminating these sources of danger; what we wish to emphasize is that stitch abscesses are by no means even presumptive evidence of the imperfect sterilization of the catgut."

The tier method of closing a wound is best. The method I practice is to use a double suture of No. 0 plain catgut to close the peritoneum, starting the suture by a loop. I use the old-fashioned Glover's or continued suture. When tying the suture, one strand is withdrawn from the needle and the other passed once more through the tissues, the two being tied with only one knot in each tier; in tying catgut a single turn is first made; then on this a reef or double turn is made and drawn tight. The fascia is then closed with a No. 1 chromic in the same way, beginning the suture at the other end of the wound, thus avoiding a multiplicity of knots in the same locality. It is four times as hard for the tissues to care for a knot of catgut as for a single strand. The skin is closed by a continued button-hole or lock stitch of No. 0 plain gut. In this way there is the restraining power of two strands with necessary work on the part of the tissues to care for only one. The so-called ten-day chromic gut is the best for the fascia; it will last longer than ten days, but that is sufficient. The great-

est attention should be paid to the fascial suture; if we get the fascia we get everything. If the skin suture should be infected, the deeper ones may escape, thus better insuring the future integrity of the cicatrix.

It is important to use care in wound-making. Any wound will heal, as a rule, after a while, by one method or another, but the well-made and well-treated wound heals best. The smaller the wound the better, if proper work can be done through it. Here is where the need for good instruments comes in: sharp knives and scissors, well-acting forceps and smooth, blunt retractors are necessary. Above all things, avoid roughly using the wound surface by clamping masses of tissue to stop bleeding. Never clamp the skin, as we often see done. Why hamper nature unnecessarily in the work of repair by depressing the vitality of the parts she is called on to heal? The rough use of sharp retractors and the pulling and tugging of the wound surfaces is bad practice. In this connection, the importance of gentleness in the manipulation of the intra-abdominal contents cannot be too strongly emphasized. Smooth linen pads are the best for sponging and packing back intestines; the ordinary gauze is too coarse and rough and is liable to break the peritoneal covering. Smooth soft toweling is to be preferred to the gauze as ordinarily used.

If we were to see a carpenter try to put two boards together as we sometimes see wounds closed, we would think him a very poor workman, indeed. If all hemorrhage is checked and nature is given half a chance from a mechanical standpoint, she will do the rest and better results will be obtained. I am no longer a believer in the efficacy of many of the methods of wound dressing practiced even now. If we do sterile work, what need is there for iodoform, mercury, boric acid, or anything else, with the exception of alcohol? Alcohol is used to immerse the knives and scissors and to clean off the soap, and is the only chemical needed in the art of asepsis. We could get along without this in a great measure if sterilization by heat did not ruin all cutting instruments. All powders do harm; this is particularly true of fresh wounds, for it confines the secretions primarily and prevents the escape of blood into the dressing; if this should be present from the strain of vomiting after the patient is put to bed.

To drain or not to drain: that is the question. Upon a proper decision may depend the outcome of the case. This is a very large subject in itself, too large to discuss in a short paper. The old rule—when in doubt, drain—is a good working rule, though as our work improves in asepsis, the necessity for drainage grows less. The rubber-covered capillary

drain fills almost every requirement; the necessity for tubular drainage is growing less.

Simple sterile gauze applied directly to the wound, the first strip being confined snugly with the zinc-oxide adhesive plaster, is the best dressing. The zinc-oxide plaster is a great advance and its uses are many. After the binder is applied and the patient is in bed, it is important to keep the region of the wound as quiet as possible; rest is necessary to the well-being of all wounds. The thirst and pain in the back are the first complaints heard from the patient; both are very aggravating, causing restless movements which jeopardize the necessary quiet of the wound. The two or three days' quiet in bed before the operation tends to minimize the backache. If during these days of preparation, excessive purgation is not practiced and the fluids of the body thus preserved, and if the patient be required to take into the stomach all the fluids possible, the thirst will be much less severe. As a routine measure after the operation, and sometimes while on the table, rectal injections of normal saline should be given; black coffee with gradual additions of nutrient material also aid materially in checking the thirst. The patient is thus supported generally and quiet induced, which is the thing we most want. I have been long since convinced that many of the failures to get an aseptic course in our wounds are due to the habit many of us have of allowing spectators in greater or less numbers, who in their desire to see the operative work crowd around the table. Their shoes and clothing are often impregnated with the dust of the street and that of other sources, which is liberated and distributed more or less abundantly over the operative field. I feel sure this is the case in amphitheater work, where the spectators stamp around above the table. The patient must be the only consideration and every possible source of infection must be eliminated.

The after-conduct of the case, after the first dressing is applied, is very simple and consists merely in non-interference for at least ten days, often better for twenty-one days. As a rule, if our work has been good, all that is to be done then is to rub off the remains of the skin sutures and apply a few strips of adhesive plaster and begin to get the patient out of bed. In other words, let the wound alone as long as it will let you alone; meddlesome inspection is often productive of trouble. The question of how long the abdominal binder should be worn in section cases is always asked. Six weeks is a good average time. It does no good after the wound is firmly cicatrized and may do harm; get rid of the binder early.

(I have taken an abdominal wound as a sample. I make five abdominal wounds where I make one in other parts of the body.

Wounds in which the cavities of the body are invaded, particularly the peritoneal cavity, are those in which asepsis is most important. Hence, in my descriptions, I have had an abdominal wound in mind.)

In emergency cases, where preliminary preparation is impossible, we have simply to do the best we can, following the lines mapped out as closely as circumstances will allow.

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DISCUSSION

Dr. L. S. McMurtry, Louisville: The paper which has just been presented to the Society is one of great interest, because it presents to us the views of a gentleman who is doing surgery constantly. These practices are at the foundation of modern surgery. I think that the subject has been presented to the Society in a very excellent way, and I think it will be to our great interest to take this paper into consideration.

In the very limited time at my disposal, I wish to mention one or two very practical points among the many practical points to which our attention has been called by the essayist.

The great difficulties with which we meet pertain to skin asepsis.

Our results in surgery, in wound surgery, would be absolutely perfect if it were possible to have the same degree of perfection in the skin asepsis as in the instruments we use, and in the dressings we apply. We cannot boil the skin, or expose it to steam sterilization, but are limited to chemical and mechanical asepsis.

I believe that in general operative work, the greatest difficulties we meet with are in this regard, and I certainly believe it will pay us to consider very carefully the best means of skin disinfection.

The essayist has presented this in a very thorough and proper way.

I do not believe that chemical disinfection is necessary to the best results.

In regard to disinfection of the hands, we must not under any circumstances become careless as to this. Do not think that just because the sterilization of your instruments and bandages is efficient, that so much cleanliness of the hands is not essential.

Another point, among the many excellent points brought out, to which I desire to call attention, is the subject of ligatures. The manufacturing chemist has, during the last four or five years, furnished us ligatures that we can use with confidence.

I believe that everyone who is doing surgery a great deal should acquire a skill in the management of animal ligatures, so as to be able to use them in every way that they can be used.

I wish to utter a little word of warning about one who is not accustomed to placing a cat gut ligature upon a large vessel. It is not so suitable for this as would be silk.

Dr. W. H. Wathen, Louisville: I will not speak in a general way, but will confine my remarks to closing abdominal wounds. Dr. McMurtry has called our attention to the necessity of cleanliness, and I will say nothing about that.

When the surface of a wound is as aseptic as it is possible to have it, we may with an aseptic suture, and an aseptic hand, have results that are bad; we may have extensive suppuration in the wound, caused by the fact that we did not bring the surfaces into perfect apposition, so as to destroy all dead space. Again, we may by tying the sutures too tightly have strangulation, causing necrosis, and resulting in suppuration, mild, and sometimes extensive.

We can unite the abdominal wound more perfectly by suturing the different layers separately, using cat gut as often as possible, not larger than No. 0 for the peritoneum and No. 1 for the fascia.

The one using cat gut should know how to use it. In abdominal surgery cat gut is often indicated, and especially so in some infected areas, otherwise you may have a continued external sinus from an infected silk ligature; if you use cat gut, even if it does become infected, it will finally take care of itself, and its disintegrated parts be discharged. Silk ligatures once infected are always infected, and a sinus will never close until they are discharged or removed, for they will not be absorbed.

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Dr. A. T. McCormack, Bowling Green: With the hesitation which a tyro naturally feels in discussing the views of such a master, I wish to make a few remarks.

I question the wisdom of the statement: "When in doubt as to whether to drain or not, drain." My own idea has been very firmly fixed that when in doubt, do not drain.

I was very much pleased with the idea that has been brought out of the danger of insult to the tissues, even when the surgery is correct. We country doctors, possibly, do not feel this as we ought. We are apt to press and handle the tissues more than is necessary; we are apt to get our instruments from those who sell them cheaply, rather than from those who make them well, and these instruments become dull or rusty and are soon not in condition for first-class service.

In the hands of such a man as Dr. Wathen, the No. 0 cat gut ligature will do all that silk does for us in the country. I am satisfied that no man should attempt to use cat gut ligatures of the small sizes without animal experimentation. I am sure that cat gut is dangerous in a beginner's hands, and it is much better to have this danger fall upon some dog or cat, than upon a patient.

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Dr. Louis Frank, Louisville: I believe that this is one of the most important papers that has thus far been brought before the society.

The paper brings out the methods which I have used in my own work.

I am a believer in asepsis in contradistinction to antiseptis, and have done away with chemicals in my own work, at times using bichloride for my own hands.

As to ligatures and sutures, I will say nothing, except that I would not go so far as some men do, and use such large sizes of ligature material.

I think that No. 2 sutures are too large to be used in any place, and I have never used larger than No. 1.

The size of the ligature or suture material, I believe, is a very important point, and one not to be lost sight of, if we wish to obtain the very best results.

The remarks which have been made regarding cleanliness of the hands are also extremely important.

Regarding Dr. McCormack's remarks about drainage, it should be borne in mind that not all men who operate have the delicate judgment which Dr. McCormack has, and if his plan were to be adopted generally by those who are lacking in this delicate judgment, they may probably make many serious mistakes, if they do not drain. I cannot see how any harm can come from draining. I would say: "When in doubt, drain."

It has been my custom to use a drainage tube, covered by rubber tissue—the cigarette drain. This can be removed at the end of twenty-four or thirty-six hours, without disturbing the wound or dressings in any way.

There seems to be a misconception of what drainage means. Many men think that drainage means packing, but this is not the case.

I think that the technique, as described by the essayist, is ideal. This may be because I follow this technique entirely.

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Dr. Irvin Abell, Louisville: The essayist has advocated the use of cat gut only. I have, during the past year, become an adherent of this method of closing wounds. Since I have learned this method, I have obtained most satisfactory results.

But, to the proposition that we **must** use cat gut, I do not agree. Some of the best workers use silk only, and get good results. I am inclined to believe their claims that silk is finally absorbed. In many cases we have reports where the wound has been opened, and the silk found to have been absorbed. I used silk for a number of years in both abdominal and pelvic work, and found no cause for complaint. I recall a case where an abdominal wound was closed with a large size of cat gut, the wound united promptly, no trouble, yet eight months afterward it became necessary to do another operation, and these cat gut sutures were found in the same condition as they were in when placed there, in a perfect state of preservation. It may be possible that this could not occur now, with our improved methods.

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Dr. James B. Bullitt, Louisville: I think that this paper, "Common Sense in Surgical Tech-

nique," is just the kind of paper we need. We are not here as specialists, but as members of the profession of Kentucky, and I believe the thing we are here for is to learn to do things in a general way which we can go home and do.

I am entirely in sympathy with those men who claim that we do not need a great hospital to do good work in surgery. There are surgeons doing just as good work out in the cabins in Kentucky as is being done in our great hospitals. Unless we have nurses in our hospitals who are very perfect, there is always great danger of having infection. Unless these nurses are perfect in their technique, there is always danger that they will carry infection around with them from one patient to another. It is the contagion that goes from the hand of the operator and his assistant, into a wound.

As to sutures, some use cat gut, some use silk, and some use hair. All have good results. Why? Because they do not strangle the tissues by drawing the sutures too tightly. As to whether you use silk or cat gut, these are only minor details, and good results are common, irrespective of the material used.

I am quite certain that the whole thing lies in our hands, and depends upon how we use these materials. I think that as we come to a more simple technique, it will bring us into closer relations, and I believe that we can have aseptic surgery not only in the hospitals, but in the whole State of Kentucky.

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Dr. L. S. McMurtry, Louisville: In regard to the remarks by my friend, Dr. Bullitt, I think he is liable to be misunderstood, in his enthusiasm.

I think that Dr. Bullitt means to say that a man who is capable of doing good surgical work can overcome obstacles, and can even do good surgical work in the cabins. He really did say that there was less danger in the cabins than in the hospitals, and I do not think that that was what he meant.

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Dr. James B. Bullitt, Louisville: The Doctor has not expressed exactly what I meant.

What I did mean to say was that an incapable surgeon in a good hospital, with an indifferent set of nurses, is an inferior man to a fairly competent man in the cabin.

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Dr. Vance, in closing: I have nothing to add to what I have said in my paper.

HERNIA OF THE URETER.

Rolando reports a case of crural hernia, in a woman aged twenty seven years, in which the ureter was found in the sac during the operation. A loop of the ureter had passed through the hernial ring, and when it was recognized it was pushed back into the abdomen. But few cases of this kind have been recorded.

THE PRESENT EPIDEMIC OF PNEUMONIA.*

By R. D. PRATT, M. D., SHELBYVILLE, KY.

Commencing in the early summer of 1903, gradually increasing in severity during the fall, reaching its climax in the winter months of the present year, spreading from New York to San Francisco, from Maine to Texas, this epidemic of pneumonia has presented some curious anomalies.

An acute infectious disease, to a limited extent contagious, it is evidently microbic in origin. Too long have we remained content with laying the responsibility for pneumonia at the door of atmospheric conditions of various kinds. It should be clearly understood that pneumonia is a pneumococcus disease. The etiology of pneumonia has been associated with several organisms of which the pneumococcus has always been given the first place as regards importance. Recent investigations show that pneumococci are always, during life, present in the blood in pneumonia. Thus in one hundred and thirty-two cases giving positive blood cultures Rosenau obtained only pneumococci.

A very ingenious theory advocated by Dr. Lindsley in the Bulletin of the Connecticut Board of Health is that the increase of pneumonia during the past winter was partly due to the increased use of soft coal. This idea is rather farfetched. Smoke, like dust, may be a predisposing cause but can hardly be called an exciting cause.

The old accepted theory that exposure to climatic changes is a cause of pneumonia has been exploded, and that ancient bugbear, the fear of draughts, should be buried so deep that it can never be resurrected. The worst epidemic of pneumonia, like that of this past winter and the winter of 1895, occur in perfectly dry, clear, beautiful winter weather. Exposure to cold, the abuse of alcohol, imprudence in living, or in short anything that lowers animal vitality, diminish the resistive power of the body and render it more receptive to the invasion of the pneumococci.

The mortality rate for pneumonia this winter has been high for the cities, low for the country. Judging from the weekly health reports the death rate in the large cities is at least 25 per cent. From conversation with a number of doctors practicing in the smaller towns and country 5 per cent. is a conservative estimate for the country. Different hygienic surroundings explain this apparent discrepancy. The cause of the much larger death rate

in cities as compared with the rural districts is from the fact that the mortality reports of the large cities are made up principally from the eleemosynary institutions where the very worst elements are received.

The clinical features of this present epidemic have furnished some surprises. In a number of cases the congestion was limited to the apex of the lung, principally in the right side, and the physical signs were obtained more easily in the back just above the scapula than in front, temperature running from 102 to 103 degrees and crisis taking place in twenty-four to forty-eight hours. Several cases had a deep seated pneumonia in which the inflammation was central in the lower lobe of one lung and never came to the surface; only on heavy percussion and deep breathing could the physical signs be made out. In children the temperature, after running a typical course for a week, would gradually decline for a day or two as if the case would terminate by lysis. Suddenly and unexpectedly crisis would take place and convalescence be promptly established. A few cases had relapses, or more properly speaking, reinfection. After several days freedom from fever a separate and distinct attack would appear, the secondary attack being invariably milder and shorter in duration than the primary. Another very unusual feature observed was that while we were in the midst of a coexisting epidemic of measles, pneumonia as a complication of measles was exceedingly rare, yet on the other hand measles as a complication of pneumonia was very frequent. The child having been taken sick, first with pneumonia, would in three or four days break out well with the measles; yet without adding to the gravity of the primary disease.

In regard to treatment there is nothing new. It is a lamentable fact that while during the past 25 years there has been a steady decline in the mortality of most of the acute infectious diseases, like typhoid fever, measles, smallpox, and a very great fall in diphtheria, there has been a steady increase in pneumonia, until now more people die from this disease than from any other, with the possible exception of tuberculosis.

Being a self-limited disease I believe in treating the individual and letting the disease take care of itself. Careful dieting, plenty of fresh air, regulating the emunctories are needed always, water externally, internally, eternally. Stimulants in the majority of cases. Strychnia stands at the head of all stimulants. Nitroglycerine, oxygen, alcohol, atropia, digitallis, coffee have their especial indications.

No specifics have yet been found. Theoretically, creosote, or some of its derivatives, ought to exert a controlling influence. Practically, after a thorough trial I am convinced it has no influence whatever. We have aban-

*Read before the Kentucky State Medical Association, Lexington, Ky., May, 1904

done one procedure of our fathers that could in a few selected cases be used to an immense advantage. I refer to bleeding. In those cases where we have a full, bounding pulse, high fever and cyanosis indicating a threatening, acute dilation of the right ventricle, moderate bleeding ought to give great relief. The brilliant results obtained by the use of antitoxin in diphtheria lead us to hope that serum therapy will be the specific in pneumonia also. The anti-pneumococcic serum however is still in the experimental stage, sufficient time not having elapsed for us to draw definite conclusions.

Pneumonia should be classed as a preventable disease, the one great fundamental principle of preventive medicine being to keep infection from spreading beyond the sick. The frequency and fearful destructiveness of pneumonia make it imperative that much greater attention should be given to problems connected with its prevention than has heretofore been done. All cases should be required to expectorate into cloths, paper cones or cuspidors which can immediately be destroyed by fire, and the secretions from the nose and throat should be treated in like manner. Complete isolation of pneumonia patients should be demanded and subsequent disinfection of the premises as thorough as after scarlet fever, diphtheria or smallpox.

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DISCUSSION

Dr. W. F. Boguess, Louisville: This has been a winter of unusual things, and, to the physician, of unexpected things.

We have seen more of the unusual types of pneumonia this winter than ever before, as Dr. Pratt states.

I have been impressed in Louisville not only with the frequency and fatality of the disease, but with the infectiousness of the disease. In one family, we had three cases developed in one week, with three deaths.

I have also been impressed with the difference of the pathology from what we ordinarily expect.

Sometimes the lobe is involved centrally, sometimes peripherally, and we have a peculiar condition which might be described as pleuro-pneumonia, when the trouble seems to begin in the visceral pleura.

There are many things to explain this condition; one is that these are not all pneumococcic infections. I understand that many other bacteria are capable of producing clinical symptoms approximating pneumonia; streptococcus, influenza bacillus, and diphtheretic bacillus, these are all capable of starting a case with all the symptoms of true croupous pneumonia.

I have seen a case where the patient was in the second attack of this kind.

The Pfeiffer's bacillus not only produces a

pneumonia, but makes it an unusually fatal disease, as there is no toxin that is so bad as the toxin of the influenza bacillus. The patient may not be sick more than a day or two, and yet be overcome with the toxins of la grippe.

I cannot explain why it is that we have so much pneumonia with or following measles. I would suggest, however, that possibly there is something about measles which has a tendency to make the bronchi a favorable habitat for the pneumococcus and other infections capable of producing pneumonic conditions.

My experience has not been like that of Dr. Pratt; in my cases the measles did not follow the pneumonia, but the pneumonia followed the measles.

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Dr. E. E. Hume, Frankfort: I listened with great interest to the excellent paper, also to the very handsomely arranged discussion by Dr. Boguess. It seems to me that they have covered the ground so thoroughly that there is very little left to be said. I am very much of the opinion that from the amount that has been written about pneumonia in the last few months, nothing could be said that has not already been written.

The disease lasts, usually, about twelve days, and is often followed by the relapsing condition, which we have very frequently now. It occurs in all climates, all latitudes, all ages, all sexes; it is said by some to be due to specific poison, by some it is said to be due to the pneumococci. Not being a bacteriologist, I shall leave that for the bacteriologists to discuss.

In some countries it is more prevalent in winter, in others, in the spring; in this country, it is most prevalent in the spring.

I think that catarrhal conditions have much to do with creating a proper field for pneumococci, or whether bacilli produce pneumonia.

I know of no local application that is more beneficial than antiphlogistine. There are, however, a great many applications that are used in the treatment of it.

As to the diagnosis, you are all so familiar with the symptoms that it will not be necessary for me to rehearse them at this time. The treatment extends over a very wide field. I am very partial to the antimony treatment when I have a patient of vigorous constitution. I have never had any remedy act so well as a full purgative dose of calomel, after a solution of antimony et potash tartrate 1-30 or 1-50 of a grain, watching the patient carefully until fever subsides.

A most novel treatment is given by Dr. Altsul in the Record of March 26, of this year. He reports two hundred and fifty cases. He recommends Potash Iodide in ten to fifteen grains every two or three hours, increasing five to ten grains at a dose as the severity of the case may demand. He says from one to three thousand grains may be administered without unpleasant results, the condition of

the heart's action being the index to its toleration. The disease is not shortened but ends by lysis, the severity of the symptoms being greatly reduced. He gives the mortality in the cases reported at only one per cent. I have never tried this treatment.

In all cases of a vigorous constitution, bounding pulse and white coated tongue, I have never had better results than from the administration of a purgative dose of calomel followed up with a solution of antimony et potassa tart. containing 1-30 to 125 grain to the drachm, giving a teaspoonful every four hours until fever subsides, and carefully watching the case to this point, then suspend all treatment as the fever is not likely to return. It usually subsides in from twelve to thirty hours and convalescence begins at once. In every case bear in mind there is nothing in the power of the physician to do that will be so beneficial as to let in to the room as much as possible of God's pure air, giving the crippled lung the advantage of all pure oxygen the out door air contains.

I well remember when I first began the practice of medicine in the country that every case I had to treat in an old log cabin where you could throw a cat through the cracks in the wall, and a large log fire had to be kept constantly going to keep the inmates from freezing, my patients all got well. Profiting by this experience, I now have the windows and doors opened to their utmost capacity and have the room well heated, open fires being preferable. I would rather take my chances in a case of pneumonia with plenty of pure air and no medicine, than all the medicine in pharmacopea and bad air.

As regards diet, your patient must be well nourished. Raw eggs, eggnog, beef tea, rich soups, good milk and solid food of a light character should be given as often as tolerated by the stomach.

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Dr. Louise Southgate, Covington: I have recently been very much interested in the statistics of pneumonia, and find that the deaths from it now exceed the deaths from tuberculosis. In New York City in the decade from 1890 to 1900 deaths from pneumonia exceeded those from tuberculosis by 5,500, while in Chicago, for the same period, we have 2,200 more deaths than from tuberculosis.

E. F. Wells, Chicago, has made statistics from all over the world, and he says that between the years 1804 and 1901, the death rate according to the number of cases has remained practically the same, 21.8 per cent.

While in private practice the death rate has been lowered, in hospitals it has increased. While the death rate has remained practically the same, he finds that the prevalence of the disease has very greatly increased and this increase is out of all proportion to the increase of population.

The death rate in Chicago in the years 1861 to

1871 was only three per cent. of all deaths, ten per cent. of all deaths are now due to pneumonia.

It seems strange that we have been able to reduce the death rate in many other diseases, until at the present time, according to the statistics for the past decade, the length of life has been increased from thirty-one to thirty-five years, yet pneumonia remains with an undiminished death rate. Why have we not been able to reduce the mortality; and why this great prevalence?

In the reduction of mortality it has been necessary, especially in the later years, to contend with a greater number of diseases, especially of the heart, kidneys and nerves, and these in spite of a better knowledge of pneumonia have helped to keep up the mortality. These diseases have been increased by the strenuousness of our social and business life and the luxury of our homes, and the stupendous consumption of alcohol which has increased until statistics now allot each one of us seven gallons of alcohol. Together with these may be mentioned the almost universal resort to coal tar depressants for every ache and pain to which the human body is heir. The increased consumption of patent medicines, which are so illy adapted to self-diagnosed disease, should also be included.

Dr. Ingalls suggests that possibly the greater mortality in the hospitals may be due, in a measure, to the fact that sometimes the nurses do not carry out the physicians' instructions.

The colleges teach that about all we can do in pneumonia is to support the strength of the patient. The hospitals largely follow out this teaching, many of their physicians being pathologists, become skeptical as to therapeutic measures. I think that we must all feel that there is a possibility of limiting the course of the disease. I have had cases in which it seemed that hot baths and a course of sweating with creosote had lessened the severity of the trouble.

In considering the subject of the greater prevalence of this disease, I think that the foremost reason is the large and increasing number of epidemics of la grippe, which leave respiratory tract a hospitable asylum for the pneumococcus, and also the facilities which we have for travel have helped in spreading the disease over a wider area of country.

The environment of city life, the crowding in tenement and flat buildings, the herding together in illy ventilated factories, concert halls, etc., should also be considered. Another thing is that we probably do not all recognize pneumonia as a contagious disease. Any number of cases have been reviewed in the medical journals in which it has been shown very clearly to be such. In my practice I had in one family within two weeks, six cases, all children.

I think that possibly because we carry the pneumococcus always in our mouths it makes us feel that there is no use in disinfection. Washburn says that the mouth pneumococcus, when inject-

ed into animals, produced a very small amount of fever, while the pneumonia sputum when injected into animals produced a severe grade of inflammation.

The Germans have mixed pneumonia sputum with earth and sand and found it living and toxic after 140 days. One case is reported of an epidemic which started from pneumonia sputum which had been thrown on a manure heap and spread on the fields. During the next two months the winds blew almost wholly in one direction. In a short while a number of cases of pneumonia were reported in homes in the direction over which the winds blew from the contaminated fields.

When we, as physicians, together with health officers and city authorities, have isolated our cases and carried out careful disinfection, the prevalence of pneumonia will no longer be so great.

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Dr. Pratt, in closing: I believe that pneumonia is a preventable disease, and I believe it should be so regarded by the physicians.

Prevention should be the great keynote; the sputum should be disinfected, and the patient should be quarantined.

PNEUMONIA, ITS MORTALITY, CONTAGIOUS CHARACTER AND PROPHYLAXIS.*

By LOUISE SOUTHGATE, M. D., GLENN B'LD'G.,
CINCINNATI, OHIO.

Tuberculosis has been characterized as the Captain of the Men of Death. Prof Osler says that pneumonia has now usurped this place. Consumption has been leveled to the ranks.

Statistics show that in New York from 1890 to 1900 there were 50,490 deaths from consumption and 56,092 from pneumonia, a difference of over 5,500 for pneumonia.

In the same decade the deaths from consumption in Chicago, were 22,957, while from pneumonia there were 25,228, making over 2,200 in favor of pneumonia.

In Chicago the first quarter of this year, 1904, the deaths from pneumonia exceeded those from pulmonary tuberculosis by 170, while in 1903 the deaths from pneumonia in the first four and one-half months were 1,468 more than those from consumption.

A. G. Brown, in Atlanta Journal-Record, gives statistics which show that 10 per cent of all deaths at the present time are due to pneumonia.

Chicago, which now seems a veritable hot-bed for pneumonia, had between 1861-1871

only a death rate of 3 percent. to total number of deaths.

Edward F. Wells in statistical tables embracing cases from all parts of the world from the year 1804 to 1901, claims that the death rate for pneumonia in proportion to number of cases, remains about the same for the last eighty years, 21.8 per cent.

That is out of every 100 cases of pneumonia about the same number may be expected to die now as have died in any time during those eighty years. That we have not lowered the per cent. of deaths to the number of cases. But he further points out that the proportion of cases to the 1,000 of population is much greater than formerly.

So that the per cent of deaths to the whole number of deaths from all causes has markedly increased.

The mortality from pulmonary tuberculosis has shown in latter years a gradual decrease. Other infectious diseases have had their death rate reduced 10 or 15 per cent. until in one generation the mortality in our great cities has been almost cut in two. The length of life in the last decade has been increased from 31 to 35 years, yet there remains pneumonia, with its never diminishing death rate, a still more frequent visitor within our gates.

Two pertinent questions present themselves to us:

(1) Why is it that the mortality from pneumonia has not decreased?

(2) What is the reason of the greater prevalence of the disease at the present time over former years?

Taking up the first question of the mortality per cent. It has been claimed by some physicians that in spite of improved methods in treatment of pneumonia, that the mortality is kept up because improved sanitary condition has increased the number of persons living above sixty years in our cities and the mortality among this class of persons in pneumonia is always greater, but as shown by the Chicago Board of Health, this is not sufficient to account for it, neither is the fact that now more delicate infants survive the perils of their first years, a little later to become a prey to pneumonia.

An important factor in keeping up the death rate, is the great increase in diseases of the heart, kidneys, nerves and of influenza. Persons suffering from these affections have a lowered resistive vitality, and consequently are not able to withstand the added strain put upon them by an attack of pneumonia.

Some of these diseases are due to the greater luxury of living, over indulgence at table or in alcoholic beverages, the consumption of alcohol having increased to 17 gallons per capita.

The habit of taking depressant drugs for

*Read at meeting of Campbell and Kenton County Medical Association, Covington, Ky., April 21, 1904

every ache and pain, has also its influence on the heart, kidneys and nerves. The modern strenuous life of the business man also lowers his vital resistance.

The great dependence on patent medicine for self cure of influenza, laryngitis, etc., causes a prolongation of these diseases. The death rate in hospitals, as given by E. F. Wells, shows a gradual increase, except in the New Orleans Charity Hospital, where the last per cent. given, 1870-1880, was bad enough, 40.2 per cent. E. F. Ingals gives a series of cases during fifteen months, preceding April, 1902, in Cook County Hospital, Chicago, the mortality was 30 per cent.

We know that the hospital gets the worst class of cases, the homeless waifs, the poverty-stricken from unhygienic surroundings, the alcoholic, etc. But is this high mortality in hospitals inevitable? E. F. Ingals in discussing this subject in a paper before the Fifty-third American Medical Association says, "Because of the efforts made in hospitals to secure the most favorable conditions for patients, by systematic nursing, and the constant attendance of skilled physicians, it would be supposed that the chances for recovery would be most favorable, but if these conditions are carefully analyzed we are led to suspect that notwithstanding the disadvantages, those who are sick in their own homes, are in some respects fortunate.

The best educated and the most progressive physicians to-day base their practice on pathological research, and strange as it may seem, this of itself may be detrimental to the patient. The pathologist, dealing only with the dead and discovering in autopsies many conditions any one of which might have caused death, unconsciously comes to believe that since remedies did not save these particular patients, therefore they are useless to all others.

It appears to be a fact that many pathologists have no confidence whatever in therapeutics, and we are not surprised at this when we consider their view point. From the fact that hospitals especially favor the study of pathology, it does not seem improbable that the physicians connected with them become skeptical as to the results of medicine, and grow more inclined to leave the cases to nature. Again nurses are often overworked and therefore do not attend so carefully to the hospital cases as they would to private cases, and it not infrequently happens that the physicians' directions are not carefully carried out.

Whether lapses in the treatment are in any respect responsible for the large mortality among hospital patients can not be determined, but the question must attract the attention of every careful physician."

The theory that we cannot cure pneumonia,

only support our patients has been thoroughly instilled into the minds of all students in medical colleges and has kept many from making any attempt to limit the disease or to try any specific medication. This, I think, has had a great effect in keeping up the frightful mortality.

Nature can do much, but still the physician has his part to do in aiding nature's work and I deem it every physician's duty to earnestly study the effects of some of the remedies brought forward by other physicians who claim to have lowered the mortality in their own practice, such as the use of the salicylates creosote, guaiacol, nuclier, etc.

The majority of opinion among the profession is against the possibility of abortive treatment, but as long as there is a doubt, give your patient the benefit of it, and when you see a case in the first stage use every recommended means in your power to stay the spread of the disease in the lung, if you think you have had a measure of success in a series of cases or if in only one case, let other physicians know of it.

Then possibly by concerted efforts we can get rid of the opprobrium which attaches to us on account of the high mortality.

What is the reason of the greater prevalence of the disease? First, and possibly foremost, the frequent recurrence of epidemics of la grippe.

The increased facilities for travelling and communication from city to city, from town to country.

The herding together of people in large cities, with narrow quarters and unhygienic surroundings.

With these conditions, the lack of recognition of pneumonia as an infectious disease, and consequently the inadequate, and in many instances, total absence of all measures to prevent the spread of the disease.

Many physicians not having ocular proof of direct contagion, still doubt that it can, with favorable conditions, be carried from person to person.

Because of this, the following instances are cited:

In Journal A. M. A. is given a report of a whole family being wiped out with pneumonia. The disease first attacked a young girl, who died in St. Peter's Hospital, her father, mother, sister and uncle called at the hospital to see her and all of them, as well as a brotner, died with the disease in a few days.

Spaet reports an epidemic of pneumonia at Neubrunn, in which 13 per cent. of the population were attacked, five of these cases developed within three days and all of these, five persons, had attended the funeral held in an infected home, ten days before the first one was attacked. While this does not demonstrate

positively that these five persons were infected in this house, still the almost simultaneousness of their attack points toward that fact.

Edsall and Ghiskey, in the *Therapeutic Gazette* tell of a series of cases, who were placed consecutively in the bed which had been occupied by a pneumonia case in the wards of Episcopal Hospital, Philadelphia.

Two of these persons had light attacks of pneumonia, and in two other cases, the pneumococcus was discovered in the blood. This looked as if it were direct infection from the bed, these patients were suffering from other diseases when placed in this bed.

Lamforde describes an epidemic. A man sickened with pneumonia September, 1901, he expectorated on sand, this was thrown onto the manure heap and spread on neighboring fields. Mild weather prevailed during December and the early part of January.

During the first part of February strong winds blew most of the time from the West and Southwest, during this period an epidemic of pneumonia developed, most of the cases living in the vicinity of the infected fields and almost exclusively among those living east of the fields in the path of the wind. The same man who originated the disease and had recovered, himself fell ill again with pneumonia.

An instance, which came in my own practice convinced me of the communicable nature of the disease. In December, 1901, I was called to see a family in the most poverty-stricken surroundings. I found in one room and on two beds, five children, three children suffering with a most virulent type of pneumonia, which had followed measles, one child had died two days before I was called in, with pneumonia. Two of these three children were wildly delirious, the youngest, a child of three, was conscious but soon died following the other two.

Two older girls, sixteen and eighteen years, were recovering very nicely from measles, when I first saw them, but one after the other they also developed pneumonia.

The disease in these six cases was broncho pneumonia.

Because of the fact that we have the pneumococcus always with us in our oral cavities, many physicians believe that therefore there is no reason why we should insist on disinfection.

But Washbourne has shown us that the virulence of the pneumococcus varies within great limits. That with the mouth pneumococci it is very difficult to increase the virulence by cultivation, and when injecting it into animals it produces only a light grade of inflam-

mation, while pneumococci from pneumonic sputum are very virulent.

He says the virulence is greatest in the beginning of the exudative process in the lung and diminishes day by day.

Immunizing serum will sometimes be active against one kind of pneumococcus and not against another. Houl states that by injecting pneumococcus sputum under the skin of a rabbit's ear a marked oedema occurs in twenty-four hours, the swelling consists of leucocytes, fibrin and cocci. The sputum from other diseases does not produce this effect, because the mouth pneumococci are either absent or in too small number, or they are not sufficiently virulent.

Germano mixed pneumonia sputum with earth, dust and sand and found that the germs were alive as long as 140 days afterwards. He found that the pneumococci artificially cultivated in tubes would not live so long in the sand unless mixed with blood or pus.

These experiments prove to us the infectious nature of our street dust during epidemics of pneumonia, and the necessity for most vigorous prophylaxis by city health boards in waging war against expectoration on sidewalks, street cars and public places, as theaters, depots, etc.

The public should be warned again and again and new laws made and existing laws enforced. The physician can do much in educating the laity and in using disinfectants and sterilization in private practice and in keeping unnecessary people out of the sick room. Also in searching out the primary cause of mysterious localized epidemics, remembering that we can have pneumococcal infection of other parts of the body as well as in the lungs.

According to French authorities there is a pneumococcal peritonitis which occurs frequently in little girls. Pneumococci have been found in the appendix causing a peritonitis, in ulceration or stomach and in intestinal lesions. Krogius reports a case of inflammation of appendix caused by this germ.

Jensen has recently published at Copenhagen a work on this subject, *Pneumococcal Peritonitis*, based on ninety-four cases, the diagnosis based on bacteriologic examination of the exudate, feces or blood. The germ in many of these cases subsequently extended to the lungs, but not in all cases. The physician can not be too careful in disinfecting discharges from his patients suffering with mysterious bowel lesions.

The sputum from a pneumonia patient should be expectorated into a sputum cup, or a paper cornucopia made of several layers of newspaper pinned together, this is cheap and easily made, can be often burned and renewed, is clean, there is little danger of contamination and it is easy to use. The patient also should

sneeze and cough into moistened clothes or paper so that the fine particles will not be thrown onto the bed coverings or floor. The bed clothes, night gown, etc., should be thrown into boiling water when changed. When the case is finished the room should be disinfected.

Physicians might point out to persons not affected with the disease the necessity for nasal and oral hygiene, to attend to catarrhal condition of these regions, the avoidance of chilling by insufficient clothing, the harmfulness of depressant drugs for backache and headache, the serious consequences which follow la grippe, the danger of self-treatment by patent medicines, above all the serious importance of a chill.

The moderate daily drinker should be told upon what thin ice he stands. Pneumonia should be reported as other infectious diseases to the health officer.

A vigorous campaign by Health Boards, Medical Societies and individual physicians against pneumonia would soon be followed by a very perceptible lessening of the mortality and the increasing prevalence.

ACUTE ASCENDING, OR LANDRY'S PARALYSIS: REPORT OF A CASE IN A CHILD OF TWO YEARS.*

By HENRY ENOS TULEY, LOUISVILLE, KY.

Professor of Obstetrics, Kentucky University, Medical Department; ex-Secretary and Chairman Section on Diseases of Children, American Medical Association; Editor Louisville Monthly Journal of Medicine and Surgery, Etc.

The occurrence of a case of ascending paralysis of the type Landry, in an infant, being somewhat unique, the following report is deemed worthy of record. A number of cases are to be found in medical literature but almost without exception they have occurred in young adults.

A female was born April 3, 1901, after a tedious labor, for the termination of which a forceps operation was necessary. Child was breast fed and gained satisfactorily in weight.

The mother was a healthy woman; the father at the time of the child's birth was thin, but apparently in good health. When the child was six months old the father developed an harassing cough, which, not yielding to home remedies, caused him to seek advice. Examination of his chest showed evidences of beginning apical changes, and of the sputum the tubercle bacilli. Change of climate was urged and on May 19, 1902, the family went to Denver, but after a stay of a year, during the latter part of which there was a steady loss in strength, the father decided to return home.

At the time of the sickness of the baby he was barely able to be out of bed and died five days after the child's death, of pulmonary hemorrhage.

This occurrence is recorded as possibly having a bearing upon the etiology of the child's sickness.

The child had a perfect health record, its gain was satisfactory, its teeth were cut without disturbance, until the eruption of the first upper canines, the early part of July, 1903, when there was a co-incident diarrhoea, of several days' duration, which yielded to home remedies, and was not at any time severe. After their return to Louisville, May 26, the child did not seem as vigorous as before, was rather listless and pale and restless at night.

On July 24th, while walking down stairs she fell down the last two or three steps to the bottom. There were no apparent bruises, but she passed a very restless night, cried a good deal and said her leg hurt. No fever was apparent. Before being put to bed, she seemed unable to stand, when placed on the floor, but when shown a piece of candy she walked across the floor once, but rather unsteadily, immediately sinking to the floor when she stopped. Noticing the doubling up of her legs when stood on her feet the next morning the mother brought her to my office. Examination showed an absence of knee reflex, with anesthesia of the bottom of the feet, and absolute loss of active motion. No rigidities. No tenderness discovered. There was but slight elevation of temperature. No involvement of rectum or bladder.

A diagnosis was made of acute anterior poliomyelitis, which was concurred in by Dr. J. B. Marvin, who saw the case the same morning.

On the morning of July 26th, the temperature was 100, pulse 148, considerable prostration, rolling of the head from side to side, slight opisthotonos, some impairment of motion of hands especially the left, which had less power.

Legs and thighs were completely paralyzed. As the day wore on the condition grew worse, complete paralysis of arm and of both lower extremities, increasing frequency of respiration and pulse. The child had little rest during the night of the 26th.

On the morning of the 27th there was complete general paralysis. She would make no attempt to move head or extremities. Intellection was perfect and her voice clear and speech distinct. She called for food and took small quantities at intervals up to two hours before her death. There were no convulsions. She undoubtedly retained consciousness to within a few minutes of her death, which occurred at 8 p. m., but she did not speak after 6 o'clock.

*Read before the Kentucky State Medical Association, Lexington, Ky., May, 1904.

Death occurred from paralysis of respiration, the heart beating for a moment after the last inspiration.

The treatment used was the application of sinapisms the length of the spine, and as long as the child could swallow, five minims of the fluid extract of ergot every three hours with stimulation p. r. n..

The duration of the illness from the first symptoms was three days. No post mortem was obtained.

The diagnosis in the case, as intimated, was acute anterior poliomyelitis, until the rapid ascent of the process was noted when the diagnosis was changed to Landry's paralysis, which we believe was correct.

This symptom-complex was first described in 1856 by Landry, but until recent years but little had been known of the pathologic changes encountered. One of the most complete articles upon this subject we have seen is by Dr. H. C. Gardinier, of Troy, N. Y., published in the jubilee number of the Albany Medical Annals.

In this article the author reviews the literature of the subject, and reports two cases, one with recovery, the other fatal, the duration of the illness in the case from the onset of the first symptoms being nine days. In this case partial autopsy was obtained, the cord and sections from a few peripheral nerves being examined.

Gardinier gives the following definition of Landry's paralysis: "Landry's symptom-complex is an acute infection characterized by an ascending form of motor paralysis, of a flaccid type, beginning in the lower extremities and rapidly extending to the muscles of the trunk and upper extremities and terminating with bulbar symptoms and death from respiratory or cardiac paralysis. The symptoms are usually preceded for a variable length of time by general malaise, various parasthesiae, slight blunting of sensibility and pain in the limbs. In some rare cases the paralysis is irregularly ascending in character, or presents a reversal of the usual type, the bulbar symptoms appearing first, the disease then pursuing a downward course. The muscles usually show no tenderness, wasting or altered electrical reaction and the tendon reflexes are commonly absent. The bladder and rectum are not often involved. The temperature, though some times elevated, is usually normal; consciousness is retained to the end. The post mortem changes, though somewhat disseminated, are chiefly confined to the peripheral motor neurons. No specific micro-organism has been isolated, though various bacteria have been found in the nervous tissue or by cultivation."

This very clear and concise definition of this symptom-complex fits so closely the clinical

history of the reported case that, even without an autopsy, which unfortunately could not be obtained, the diagnosis seems clear.

The pathology of this trouble is much clearer since the development of the newer technic of examination of nervous tissues. The results of investigations by the newer methods of examination show the condition to be unquestionably the result of severe toxemia in which the lower neurons are especially involved. In the very rapidly fatal cases no pathologic changes may be found, but we would expect these cases to be limited to the rapidly fatal in those patients who are especially susceptible. Among the special bacilli isolated may be mentioned anthrax, bacillus of Eberth, streptococcus longus, and others which have not been named, and various bacteria. Landry's paralysis has been known to follow la grippe, the exanthemata, pneumonia, acute gastric intestinal infection, syphilis, tuberculosis, etc. In the case reported there was a slight gastro-intestinal disturbance two weeks before the onset of the fatal illness. The abundant opportunity for this to have been a tubercular infection should be borne in mind.

The local changes found by Gardinier in his autopsied case were chiefly in the ventral horn cells, which throughout the entire cord showed distinct degenerative changes, being most marked in the lumbar and cervical regions. There were acute parenchymatous degenerative changes also in the peripheral nerves examined.

Wilson (American Medicine, July 25, 1903) reports a case in a youth of eighteen with death in seventeen hours from the onset of the first symptom, but in this case there was a pre-existing malaria of severe type which must have influenced the course of the Landry's paralysis.

Because of the varied types of this disease, and because the term is now used as descriptive of so many, it has been suggested by some that the term Landry's paralysis, first described as the regular ascending type of paralysis, should be dropped. Mettler (Journal American Medical Association, May 14, 1904.) says: "in behalf of scientific accuracy, one of the following reforms is imperatively demanded: the term itself should be dropped, or a new and greatly expanded conception of its meaning should be adopted, or the symptom-complex which it represents should frankly be recognized and so treated in textbooks as one of the many possible phases of a particular well known disease process."

"Viewing the question from all sides, then, the following conclusions may be accepted as fairly representative of the modern conception of Landry's paralysis and its relationships.

There is a form of nervous intoxication, whether specific or not is unknown, in which the lower motor neuron and its associated structures, together with the consequent clinical picture produced by that lesion, are dependent on many factors, chief of which are the virulence of the poison, the duration of the disease and the individual susceptibility of the patient.

"One phase of this intoxication is covered by the definition of Landry's, other phases are the symptom-complexes that closely resemble multiple neuritis, acute anterior polio-myelitis and acute myelitis."

Undoubtedly there are cases in which the difference between these diseases may be so slight as not to be recognized, yet there are essential differences which aid one to a differential diagnosis.

In multiple neuritis the following symptoms may be mentioned as peculiar to that condition: the preponderance and early development of sensory symptoms, early loss of reflexes, electrical reactions, characteristic gait, often ataxic; dropfoot and wrist; muscular atrophy following the loss of power; contractures; mental disturbances and delirium.

In polio-myelitis the paralysis embraces chiefly the lower extremities; is not usually symmetrical; there is an immediate tendency to improvement followed by the characteristic atrophy; with but few sensory symptoms.

In acute myelitis there is great pain as a rule; early loss of control of bowel and bladder sphincters; paralysis and loss of reflex of muscles whose nerve distribution is from that section of the cord involved.

Recognizing the toxic origin of Landry's paralysis, the indications for treatment are much clearer, being supportive and eliminative.

Elimination should be accomplished by all the emunctories, reliance being placed on calomel because of its beneficial action upon children. Small quantities of concentrated and predigested food should be given at frequent intervals.

* * * * *

DISCUSSION

Dr. George P. Sprague, Lexington: This is certainly a very interesting case. It is a case particularly interesting to the neurologist, because of its rarity in a child so young.

I am one of those who believes that there is no such disease. The consensus of opinion now is that polio-myelitis, some cases that cannot be distinguished from multiple neuritis, and some cases of acute myelitis are one and the same disease; that the typical symptoms of Landry are simply a group of symptoms of one broad disease, which grouped under the name of a disease, as a disease, are misleading. We might just as well pick out cases of typhoid fever and other diseases,

where there is absence of the usual symptoms, and give them distinctive names.

The pathology, as Dr. Tuley said, is becoming somewhat more satisfactory, but is certainly far from being satisfactory yet.

There are cases which cannot be distinguished from others in which nothing pathological is found. It must be true, though, that whether the poison is from tuberculosis, syphilis, rabies, or what not, the ethiological factor is a toxine acting acutely upon the nervous system, usually the cord, or lower neurons, as has been mentioned, and successively involving higher nerve structures, and here, again, the symptomatology and pathology are very obscure, because the most serious cases often arise without the involvement of the higher nerve structures, and pursue a descending course; or, again, cases that begin with the typical states of paralysis of the feet and muscles go on to the involvement of higher tissues, and, after months of constitutional symptoms, get well.

From this it is apparent that the general practitioner can probably never make a satisfactory diagnosis, and the neurologist will never be able to make a diagnosis satisfactory, to himself, until we give up the idea that there is a specific disease called Landry's paralysis.

* * * * *

Dr. Curran Pope, Louisville: In listening to this very entertaining and instructive paper. I was at once struck with the regret that the present intelligence of the community is such as to frequently deny to the medical profession an opportunity for etiological and post mortem investigation of these rare cases, the value of which would be inestimable. I am sorry to notice that the writer failed to make thorough, exhaustive and careful examination of all the muscular structures by means of the now well known electro-diagnostic tests. In two cases in my practice I felt sure that I had struck this disease, but was compelled to change the diagnosis upon further investigation.

We cannot eliminate doubt about this disease, without these necessary investigations.

Landry, in 1859, proposed a name for a certain association of symptoms, and stated that it was without pathological foundation. Of course, at this time, he labored under the disadvantages of not having the facilities we now possess for investigating nerve diseases.

An interesting point, to me, is the anatomical distinction of the diseased neurons and, their relation to the vascular supply of the spinal cord. If you will stop and study Landry's paralysis, you will find that the lower neuron bodies are all supplied by the anterior spinal artery.

I was peculiarly struck and interested with the statement of Dr. Boggess, in discussing another paper this morning in regard to the pneumococcus; that while there is a specific pneu-

moccus germ, there are other germs that will produce the same condition.

By some interesting investigations by Buzzard, he has been able to isolate a diplococcus, that produced the disease in rabbits, and this is an exceedingly interesting confirmation of the prevailing idea that it was a toxic trouble. Even 54 or 55 years ago, Landry was astute enough to believe it to be due to a toxic condition.

The diagnosis of Landry's paralysis is something that will tax the ability of any observer. It demands, not only the most careful examination, but repeated examinations.

As to treatment, I cannot speak along that line further than to say if it be due to a toxic condition, we should deal with it just as we would deal with any other toxic condition.

* * * * *

Dr. F. F. Clark, Lexington: This report of Dr. Tuley's is one of very great interest. It is a very rare disease, especially in so young a subject. The essayist, and the gentlemen who have discussed it have gone over the ground very thoroughly.

There is one suggestion that I would like to make.

I believe that Dr. Tuley and Dr. Pope suggest that its development is due to an anterior myelitis.

As to whether it is a specific poison or not, it has been suggested that it begins with the anterior cell of the neuron, which would explain the diversity of the symptoms in different times.

I agree with them that this name should pass away from the nomenclature of nervous diseases.

I made a report of a case, which I had occasion to see about a year ago.

* * * * *

Dr. Tuley, in closing: I thank you very much for the remarks which have been made. I have very little to add.

We have no better name for this condition. I believe that the term Landry's paralysis, will finally be eliminated, but we must look to the workers in neurology for a suitable term. We are laboring, in the Section on Diseases of Children in the American Medical Association at present, looking for a correct nomenclature of the diarrheal diseases of infancy, a question we believe will not be settled for years to come. Like the gentlemen who have spoken, as I have stated, I think that this term is not a correct one.

As to the criticism by Dr. Pope, of the case reported it was entirely just, but under the unfortunate conditions under which we were laboring, because of the rapid development of the disease, and the impending death of the father, it was not possible to make a complete examination with the electric current, as should have been done.

I think the diagnosis of Landry's paralysis was correct.

WHY PROPERLY PAID COUNTY HEALTH OFFICERS ARE ESSENTIAL IN KENTUCKY.*

By J. N. McCORMACK, M. D.

Secretary State Board of Health.

Since January, 1898, smallpox has prevailed more or less extensively in every county in Kentucky, with a total of 21,616 cases and 300 deaths, and cost in cash from our county and municipal treasuries, as gathered from official reports, the sum of \$515,775, and an estimated loss from interference with business and travel of \$1,227,435.

Within the past year there were 13,305 cases of typhoid fever, with 1,579 deaths, officially reported in 98 of our 119 counties. At the conservative estimate made by the various boards, some of them entirely too low, the actual cost of caring for those sick of this disease, to say nothing of the loss of time, reached the enormous sum of \$963,750.

It is now universally conceded that the State has no more valuable asset than that represented in its vigorous population. As this disease is practically confined to persons in the prime of life who could contribute most to the public wealth and prosperity, those who die of it represent a direct, tangible and irreparable loss to the Commonwealth. Political economists place a commercial value of \$1,000 on each healthy immigrant who reaches our shores. Placing the same value upon each of the much higher class victims of typhoid fever in Kentucky gives a calculable and definite loss of \$1,579,000. Adding this to the cost of caring for those sick of it, as above figured, we have a total loss or cost to the people of this State in one year from this disease of \$2,542,750.

Dysentery, scarlet fever, diphtheria and other diseases of this class constitute appreciable though lesser drains upon the resources of our people, while consumption, "the great white plague," recognized now as a preventable disease, causes one-seventh of our entire mortality.

These are all germ diseases, and do not spread except where the seed are sown. The conditions and laws under which these germs multiply and spread vary with the different diseases, but are now as well known to the scientific world as the methods of distributing the seeds of wheat, corn and weeds are to the farmers, and these diseases are as impossible without the germs as crops would be without the seed. As this knowledge has become exact and practical all civilized countries have established more or less complete departments for preventing the introduction and spread of all the communicable diseases. Our own coun-

*Read before the County Attorneys' Association of Kentucky, Mammoth Cave, July 28-29, 1904.

try has been less progressive in this work than many of the European nations, largely, no doubt on account of peculiarities in our system of government.

With us millions are expended to protect property from fire, floods and other dangers; other millions to prevent the spread of diseases among domestic animals, and to protect fruit, cotton and other crops from blights; but, except in the presence of a public calamity in the way of pestilence, hundreds of thousands of lives are annually sacrificed in this country from our ordinary household plagues, without comment, which could be saved with as little effort and expense as are constantly appropriated for less important affairs as a matter of routine. Millions are properly expended for the humane care of the indigent, defective and criminal classes, while a useless and ceaseless slaughter of the youth and flower of the land goes on without exciting remark, or is ignorantly attributed to a dispensation of a divine and inscrutable providence.

In agricultural and other sparsely settled communities, under ideal conditions of society, where every one knew his duty and performed it, sanitary supervision of any kind would not only be unnecessary but out of place. The same would be true of courts, prisons and all of the other expensive and troublesome appurtenances of government. But our conditions are far from ideal either in country, village or city. The problems incident to the rapid increase of population in this country, both rural and urban, are becoming more complex every year. Our rivers, which must be the source of water supply for future generations, are rapidly being converted into open sewers, poisoned, as are the soil and air, both from ignorance and greed upon the part of individuals, private corporations and municipalities. Add to these the facilities for transportation of persons, things and diseases, within recent years, and the necessity for active and intelligent sanitary supervision of every jurisdiction becomes manifest, if the health and lives of the people are to be protected.

Under other circumstances it might be interesting to discuss the elementary question as to whether the individual or the State should do any or all of this work. Between the socialist, who believes it should do everything, and the anarchist, who believes it should do nothing there is every shade of opinion. The truth, as usual, lies between the two extremes. Under modern conditions, when the individual has done all in his power for his own protection, there still remains a large domain where he must be protected by some general authority, or perish. Recognizing this to be true, long before your official life or mine began, our law makers provided crude machinery for effecting

such protection, far in advance of either the public or professional sentiment essential to its successful operation. Judicial decisions from year to year have extended and broadened the responsibilities and powers of such agencies, the health boards, until, in theory at least, they are coextensive with the problems to be faced and the police power and resources of the Commonwealth.

All of this has been an evolution in which individuals, and individual opinion, have counted for little, and the movement is still in its infancy. As might have been expected in a development about which those concerned had something to learn, and in which the interests were so varied and conflicting, there has been much waste of energy, and seemingly useless controversy and confusion. Some of this grew out of the looseness of the legislation, which was unavoidable in the state of our knowledge at the time it was enacted, but probably much of it would have occurred even had the legislation been perfect. Medical knowledge has advanced with leaps and bounds in the last two decades unprecedented in the history of the world, and, in these matters especially, has reached an exactitude for which public sentiment is by no means prepared.

Practically much of the conflict referred to has been between the health boards and fiscal courts over the cost of managing epidemics, and as to the compensation for the services of the medical officers after the trouble was over. It is a little singular that no trouble of this kind has occurred between such boards and the fiscal authorities of our cities, where exactly the same problems were involved. After a large opportunity for observation, I am frank to say that I have sometimes found the medical officers at fault, but much more frequently the trouble has arisen from parsimony, narrowness and a seeming desire to make a record, usually upon the part of non-professional county judges.

Over and over again I have seen epidemics assume large proportions and cost thousands of dollars where it started, and in adjoining counties, when a prompt and cordial support of the health authorities would have resulted in stamping them out at the beginning at small expense. I am satisfied two-thirds of the vast sum expended for smallpox in this State was wasted in this way. I would emphasize that it was the higgling and delay at the outset that has proven so expensive. "The laborer is worthy his hire," and this is particularly true of a health officer. His is a responsible, unpleasant and unpopular work. It is as dangerous for a doctor as for one of you. Often I have seen his claims contested by members of fiscal courts, no member of which

would have discharged his duties one day for all he asked for a years' services.

As a result of these costly and often unpleasant experiences to all concerned the law was amended by the last General Assembly and an attempt made to secure harmony between the health boards and fiscal courts by dovetailing them into each other, as it were. While this is in a measure experimental, as it makes it possible to put the whole work upon a business basis, so that the court can know at the beginning of the year just what it is to pay for management, and the health officer may know what he is to receive, it is a decided step in advance.

In many of the counties the salaries have already been arranged, some under the old law and some since the new law was enacted. For Jefferson county, outside of the City of Louisville, it has been fixed at \$1,200; in Fayette, outside of the City of Lexington, \$900; Franklin, outside of the City of Frankfort, \$600; Campbell, outside of the City of Newport, \$400; Henry, for the entire County, \$500; Owen, \$500; Monroe, Jessamine and Warren, \$250; Christian and Rowan, \$200. While none of these salaries will bear favorable comparison with those received by other county officials performing as important and responsible duties, considering that it is a new work, not yet very well understood, those fixed in the first named counties are encouraging. In the others, it is obviously inadequate and should be re-arranged in the interest of both economy and good service. In the average county to secure efficient service the salary should not be less than \$600; in the smallest, not less than \$200; and in the intermediate counties at some just amount between these figures, and the officer should be promptly removed if he does not earn his salary.

Like yourselves, I have no personal interest in this matter, but, after nearly a quarter of a century of experience as a public officer, I am convinced that our health affairs can not be safely and economically managed without one well-paid official in each jurisdiction, in whose hands the responsibility and authority connected with this work are concentrated. With the growth of knowledge and population, and a more perfect organization, it is probably only a question of time until he will be required to devote his entire time to his life-saving work, looking after the prevention and restriction of typhoid and scarlet fever, diphtheria, dysentery, cholera infantum and consumption, as well as smallpox and the less frequent and fatal maladies. Diseases should be important to any community in proportion as they affect the sick and death rate. The diseases named are the annual scourges of our people, and they are preventable. They cause more deaths in

Kentucky every summer month almost than have occurred from cholera, yellow fever and smallpox in all the years since Daniel Boone first spied out this fair land. The trouble is that our people have grown so familiar with their ravages that they look upon them as inevitable, and they go on decimating our young manhood and womanhood almost without a protest.

One man in each county if he is the right man, can accomplish much to set these things to rights. At the outset, his work will be largely a campaign of education. He ought to visit and address the schools, teachers and other public gatherings, distribute literature, and keep in touch with the leaders of thought in his jurisdiction, and my Board will see that he does it, or assist you to put some one in his place who will, if provision can be made to compensate him.

He will always be human, like you and myself, and unless a rich man, can not and will not give the time and thought to this work gratuitously, which the welfare of the people demands. A great observer has said that "he is the greatest man who makes two blades of grass grow where only one grew before." To my mind, he is a still greater man who saves two useful lives where only one would have been saved without his efforts. You have the opportunity to give inestimable aid in this noble work, and I earnestly urge you to counsel your respective courts wisely and impressively in this matter. I beg of you to lay aside your prejudices and false notions of economy and deal with this great practical subject in the broad and liberal spirit demanded by its importance to the well-being of our people. If you will, I feel sure that thousands of useful lives, probably including some dear to you, can be saved to the Commonwealth annually, and that the money expended will be returned ultimately a hundred-fold.

THE LEISHMAN-DONOVAN BODIES.

These interesting parasites are often associated with splenomegaly in India and other tropical countries. They have usually been found in the spleen, liver and bone marrow. Sir Patrick Manson and George C. Low (*Brit. Med. Jour.*, May 28, 1904), report having found the bodies in the lymphatic glands of the mesentery in a patient dead from the disease, sections of the pancrea, kidney and large and small intestines showed nothing. This information is valuable, because it is along these lines that the life history of the organism will have to be worked out.

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APPENDICITIS.

When this magical word is uttered nowadays in assemblages of medical men it falls like a trumpet blast on two kinds of men. One kind immediately takes to the woods to avoid the rumpus entirely, while the other kind betakes itself to the rock pile and comes back with its pockets well filled to do homage to the individual who has hazarded the discussion. *The Kentucky Medical Journal* belongs in this instance to the latter class, and desires to shy a few rocks at Dr. T. H. Baker, whose article, "Management of Appendicitis," appears in the *Louisville Monthly Journal of Medicine and Surgery* for August, 1904.

In the first place we desire to protest that there should no longer be discussed any such thing as the medical treatment of appendicitis as opposed to the surgical treatment. The first pre-supposes that in lieu of operative measures, there is a method of treating appendicitis by means of medicines. The latter pre-supposes that every case of appendicitis must be submitted to surgical operation, no matter at what time seen, no matter what the condition of the patient and stage of the disease. Both of these presumptions are wrong. Let us, then, rather speak of the non-operative and the operative treatment of appendicitis, and let us understand once and for all time, that in the treatment of disease, of whatever kind, the medical man (internist) is no more under obligations to give medicine than the surgeon is to perforce perform a cutting operation on every patient turned over to him for surgical care.

Were it possible, this subject should be discussed from the standpoint of the physician pure and simple, a man neither necessarily an internist nor yet a surgeon, but one to whom the patient's well being, perhaps his life, has been intrusted. Such an one would desire to ascertain the truth, rejecting all preconceptions and dreamy theorizings, and basing his final conclusions on proven facts as inexorable and cold as the marble stones which mark the resting places of many victims of both the in-

ternist and the surgical operators, for it is not one of these alone who has erred in the past in the treatment of this dread disease.

Dr. Baker is too well known throughout Kentucky to permit his article to be widely circulated in the State without challenge and vigorous protest. For purposes of clinical consideration he makes the following classification:

1. Mild catarrhal appendicitis.
2. Appendicitis with distinct abscess formation.
3. Acute perforating appendicitis.
4. Relapsing appendicitis.

He then states that a majority of all cases is included in the first group, and that they recover under medical treatment and without any of the distressing sequelae which so frequently follow the surgeon's knife. We would have been glad if the Doctor had named by name these "distressing sequelae which so frequently follow the surgeon's knife," because we are laboring under the impression that no operation in surgery, perhaps, is followed by fewer distressing sequelae than the operation for appendicitis in its early stages. And that is what catarrhal appendicitis means, appendicitis in its early stages. If our author means to limit the cases of catarrhal appendicitis to those that get well without further progression into one of the more dangerous forms of the disease, then, willy-nilly, we must agree that all of these cases which do not get worse get well without operation. But if they get worse instead of getting better they drift into one of the other three divisions of his classification. In this event it is quite another story. In this connection listen to the words of one of the wisest, best and most conscientious of American surgeons, and one of the best teachers of any country and any time, Dr. John B. Murphy, of Chicago. In an article entitled "Two Thousand Operations for Appendicitis, with deductions from his Personal Experiences," (*American Jour. Med. Science*, August, 1904,) he says:

"The diversity of opinion expressed as to the presence or absence of pus in acute, infective appendicitis, in the discussion in 1889, 1890, and 1891 is most interesting reading to the student of medical progress. Practitioners whose cases recovered from the attack insisted that they were catarrhal inflammatory processes, and recovered without the formation of pus, notwithstanding the evidence produced by every operator of that time that pus was present in all of the acute infective cases operated in the early stages—now a generally recognized fact. Were it not for the sacrifice of our own dignity and the possibility of hurting the feelings of an estimable man, we would feel much inclined to invite our essayist to go way back to 1889 and lie down, and permit the

wheels of progress to traverse his body up to the year 1904.

Further along Dr. Baker quotes Dr. Murphy as follows:

"I am satisfied there are some cases which can be cured by medicine." That Dr. Murphy did not intend by this remark to countenance the giving of medicine by the internist in contradistinction to operation by the surgeon, let the following remarks, made by him in discussing a paper by Dr. Deaver, at Saratoga, in 1902, attest:

"We have come to the conclusion to-day more unanimously than ever before in this association, that the time for operation is within the first thirty-six hours. We are agreed on it as medical men; we are agreed on it as surgeons. If we are agreed on this one point, stop there." And again: "Will you do an operation that might be avoided? Yes * * * That patients do recover without operation no one can deny. The mortality should be reduced to half of one per cent. The diagnosis can be made early. If the saving of the lives of people is entrusted to us we have one thing to do, and that is to act within the limited time." At St Paul, in 1901, in discussing this same subject, Murphy said:

"Finally, I feel more strongly the position I took ten or twelve years ago, that all cases of appendicitis are dangerous to life, that in ninety-eight per cent. of cases the infective material is confined within the appendix during the first twenty-four hours, that operative procedures instituted within that time give a mortality of less than one per cent.; that the percentage of danger from the disease is enormously greater if interference be postponed beyond that time; and since my sacred and solemn duty to my patients compels me to treat them by the means which least jeopardize their lives, therefore—that an operation should be performed within twenty-four hours after the first onset of the symptoms."

More is not necessary, we believe, to show that Murphy considers "catarrhal appendicitis" as the beginning of appendicitis of any kind and that he believes that appendicitis, no matter what variety it is going to turn out to be, should be operated on early, while the infection is still within the appendix, while the inflammation is still "catarrhal", mayhap.

Our essayist would seemingly have us believe that he can diagnosticate "catarrhal" appendicitis, and can point out the cases which will get well as such, and the other cases which will progress to "distinct abscess formation," "acute perforating appendicitis," or which by good chance will survive all these dangers and possibilities and live to be cases of "relapsing" appendicitis."

If this were possible there could be no argument about the matter; the cases which were

going to recover promptly without going further than a simple catarrhal inflammation could be left alone to their own sweet will, while those which were of more dangerous forms could be operated on in the early stages, when operation is quite safe, as our essayist tells us that in these classes surgery offers the best chance.

But now comes the serious question: Can our essayist, or any one, know at the beginning of a case of appendicitis what particular pathological condition will ultimately be evolved in the particular case in question? Let us again turn to Murphy's utterances in regard to this point. At St. Paul, in 1901, he said: "Is it possible to make a diagnosis of the pathologic conditions within the peritoneal cavity from the symptoms? That is the most vital question from a practical standpoint. I take the stand for myself; I take the stand for our profession; I take the stand for the people, that we can tell from the symptoms neither the extent of the pathologic changes within the abdomen, nor the tendency of these changes. When we assume to do this we put ourselves in the position of judges from the outside, as to whether the pathological conditions in the peritoneal cavity are going favorably or unfavorably. The greater my experience with acute peritonitis and acute appendicitis, the more certain I am that I am unable to diagnosticate the type and degree from the symptoms and physical signs; the more certain I am that I can not say from the course of appendicitis in the first twenty-four or thirty-six hours that it will not terminate in that virulent, fulminating appendicitis which every surgeon and practitioner dreads; the more certain I am that I cannot say whether it is a staphylococcus infection, a streptococcus, or a violent type of the bacillus coli communis infection. Many years ago I believed it was possible for me to say, this is one type of infection; that is another. But now with something like sixteen hundred cases of appendicitis operated, I am convinced it is impossible to say what the type is and what the termination."

In the article referred to in the American Journal of Medical Sciences, the same author again affirms his conviction: "From the symptoms and clinical course of the disease in the first forty-eight hours it is impossible to predict with any degree of certainty, what the subsequent course of the case will be—that is, whether the tendency will be to subsidence and cure by natural processes, or to a virulent, if not fatal, termination. This is the consensus of opinion of the large majority of those surgeons of greatest experience."

So much for the possibility of being able to predict at the beginning of an attack of appendicitis (in the first thirty-six or forty-eight

hours) what its subsequent course may be, whether mild and tending to recovery (from that attack at least), or virulent and tending to a most tedious illness or a fatal culmination. Similar expressions could be quoted from a number of our best known American surgeons, did space permit, all showing the same settled conviction expressed by Dr. Murphy, of the impossibility of making a safe prediction. These men have collectively operated on several thousand cases, and are almost without exception, unanimous in this conclusion. Shall we compare convictions derived in such a way with those from a meagre individual experience of fifteen cases, or even from a "score of cases," the record of which is in all probability only in the recollection of the esteemed practitioner from Central Kentucky, and concerning which quite possibly no accurate note has ever been made? We cannot deny that these men with their thousands of cases, have had excellent opportunities for observing the disease and reaching conclusions about it. If we do not accept these conclusions, shall we believe that these men are not honest, or simply that they are mistaken? Surely not the former; almost as surely not the latter.

Our essayist's conclusions, Nos. 3 and 4, are as follows: (3) Ninety-nine per cent. of simple catarrhal appendicitis cases will recover under good nursing, absolute rest and conservative, judicious, medical treatment. (4) As more than fifty per cent. of all cases of the disease are of the mild catarrhal nature, it follows that over half of all cases of appendicitis will get well without operation.

As to conclusion three: All surgeons of experience concur in the statement that the removal of the appendix in the early stages of appendicitis is practically not more dangerous than exploratory laparotomy, and that the ideal mortality in such cases should not be more than one per cent. This equals the essayist's claim for the medical treatment of "catarrhal" appendicitis.

Now as to the fifty per cent. of cases which are not catarrhal, (conclusion 4): they are tacitly admitted to progress into "abscess cases, perforating cases and relapsing cases, and are best treated by surgery." Let us ask, what is the mortality in this class of cases, cases which have not been subjected to early operation, but have been permitted to progress into these more serious forms of the disease, and which are recommended by the essayist as suitable for the surgeon's art?

Deaver, whose name in America has almost come to spell appendicitis, told us at St. Paul in 1902, that his mortality for the year 1900, in one hundred and forty-four acute cases was 15.9 per cent. In 1902 at Saratoga, he told us his mortality for the year 1901 in two hundred and seventy-nine acute cases was 15.3 per cent.

In contrast with this high death rate his mortality in one hundred and thirty-seven chronic cases was 0.7 per cent. He adds: "These figures speak for themselves and demonstrate beyond question the possibility of removing the appendix at the opportune time with practically no mortality." Deaver's mortality agrees very well with the reports of other surgeons who have not had always the good fortune to operate at the "opportune time."

Our essayist would seem to provide this mortality for the surgeon called upon to operate on his fifty per cent. of cases which turn out not to be "catarrhal," and which must then be submitted to operation at a time which is certainly not "opportune." Further than this are the fifty per cent., which are "catarrhal," ninety-nine per cent. of which recover, spontaneously *cured* of the trouble?

Robert Abbe, in discussing Deaver's paper at Saratoga, said: "The question, 'How long was the appendix diseased before we took it out,' is one of immense importance, and when it is settled in our minds we learn that the appendix once diseased is always diseased." This fact, the persistence of disease of the appendix when once begun, is asserted by many able investigators, and is denied chiefly by those only who have never had the opportunity of examining appendices in a way to determine the presence of pathological changes. It is certainly a clinical fact that the great majority of people who have an attack of appendicitis, have recurring attacks, each one of which subjects the patient to the dangers incurred with the first attack. In other words, the patient who gets through an attack of appendicitis, is *not cured*; he is simply over that one attack. His appendix is still there, almost certainly in a damaged condition, and likely at any time to be the seat of another inflammation, with the grave dangers incident thereto.

We quote again from the concluding pages of Murphy's recent article: "Can the general practitioner make an early and accurate diagnosis? Yes. This is admitted by all at the present time. Is he justified in hoping that the case will subside and go through to a favorable termination? No! We will admit that eighty per cent. of the cases recover from the attack; that twenty per cent., approximately, of the cases either die in the first attack or have recurrences. If he decides to wait it is with the understanding that he is willing to sacrifice that per centage of his patients.

* * * * The obligation of the surgeon is to conduct a case of appendicitis to a favorable termination *with the least hazard or risk to the patient*, regardless of his personal or professional feelings, or of the praise or condemnation of his conduct."

It has been truly said that no case of appendicitis has ever died *which could not have been*

saved had it been operated on at the opportune time. If we can accept the statement that operation for appendicitis in the early hours of the disease is practically as safe as exploratory laparotomy, we will regard the above dictum as a truism. Bear that in your minds, all ye practitioners who believe with our essayist that cases should be given "judicious and conservative medical treatment," and only be turned over to the mercies of the surgeon when the case has progressed to "abscess formation, or to perforation," when the mortality rate is acknowledged to be from fifteen to twenty per cent. One of our friends is prone to say that when the day of judgment comes, and the trumpet calls, many poor women will rise up in accusation, some holding up sponges and instruments lost in their abdomens during surgical operations; and yet others, and more, offering as mute evidence great clots of blood from slipped ligatures. We believe these will be far outnumbered by those, both men and women, who will hold on high perforated and sloughing appendices, and whose words of accusation will be, "We might have been saved."

Just one word more and we have done with a discussion which has tolled us on much further than we started out to go. Our essayist quotes a "prominent physician of Central Kentucky * * * who states that he has treated medically scores of cases of appendicitis without ever resorting to surgery, and with a lower mortality than is claimed by any surgeon from McBurney down the line, and predicts that the honest and enlightened doctor of 1920 will regard the appendicitis surgery of 1903 and 1904 as an unspeakably horrible memory, alike dangerous to the patient and disgraceful to the profession." If the physician referred to means that the still unfortunately high mortality rate in many quarters, owing to delayed operations, will constitute the unspeakable horrible memory, we say most heartily, Amen! But if he means anything else, we know of but one word in the English language which can adequately express our feelings, and that word is—bosh!

The conquest of the knowledge of appendicitis in the first place, and the development of the ability to deal safely with it in the second, both consummated by the surgeon, constitute two of the most brilliant and satisfactory chapters in the whole history of medicine; and in contemplating them let the practitioner not look at them as a thing apart from himself. For internist and surgeon are both complementary parts of a whole, which can never approach perfection until both will seek the truth freely and broadly, unhampered by the narrow horizon of a limited personal experience, unfettered by a prejudice born only of ignorance.

ONE HUNDRED REPRESENTATIVE MEN.

A good number of responses have been received to the request sent out in July to prominent physicians throughout the State asking them to agree to attend county society meetings when requested, for the purpose of assisting in the work of organization. At the same time, there are quite a number of these requests which have not yet been heard from. It is to be hoped that gentlemen who received the letters or request will make response without delaying longer, and if they cannot respond favorably that they will at least respond unfavorably, stating the reasons which deter them from giving this assistance to State organization.

County societies are also requested to consider further the plan submitted, and to inform the State Association at what time they desire a representative of the Association to meet with them.

THE STATE MEDICAL JOURNAL.

The reasons for the establishment of an independent journal, owned and controlled by the State Association, have been detailed more than once in these columns. But in view of the fact that many of our sister States, notably at present Ohio, are in the travail through which we passed something over a year ago, it seems opportune at this time to again detail our own experience in the hope that others may find encouragement to do a good thing for the State Association, a good thing for every physician in the State.

In order to be entirely independent, above and beyond the suspicion of being run for purely individual gain, it is essential that the State Medical Journal should be owned and controlled by the State Association, from the title page clear through to the back cover. Why do privately owned journals exist at all? Is it for philanthropic purposes that altruistic editors take money risks and give valuable time to their conduct? Not at all. It is for the purpose of money making, directly or indirectly. We have no intention of saying that such purpose is not an eminently proper one. If something which is sold brings profit to the seller, and profit to the buyer, surely it is as proper a thing as can be. We are only attempting to look at the matter as it really is. Money making becomes thus a prime necessity of your privately owned journal. Without it its *raison d'être* disappears. As a consequence the journal makes sturdy efforts to secure advertisements, and, being necessitous, is not over particular as to the kind; it is only the number which is of importance. To turn away a paying advertisement because it is not

strictly ethical is just like throwing away money, and the journal cannot afford to throw away the very thing which constitutes its reason for being at all.

Now, your State Medical Journal is quite independent about this matter. Being assured from its very inception of the backing and support of the State Association, it could readily exist if it carried no advertisements at all. Indeed, some very excellent gentlemen have urged that it would be more dignified for the State Journals to carry no advertisements. But this view is hardly tenable if we are willing to concede that things advertised have value in the treatment of the sick. If such is the case, the medical journal is the natural and proper medium of communication between the maker and the user; and even if advertisements were not paid for at all, when viewed in this light the pages devoted to them would still be useful ones, provided always the advertisements were of the right kind.

So much for the vulgar and purely business considerations. The State Journal has other and much more important functions. It must, and undoubtedly will, serve to hold together the organization which has been effected in the various States at the cost of so much labor. It must be made to do for the profession in each State what the Journal of the American Medical Association has done for America at large. It must "carry the message to Garcia" within the State boundary; it must stimulate activity in the county society, which is the unit and basis of the whole fabric of the new organization; it must strive not so much to exploit the few bright stars of the galaxy, but rather to develop all over the State the lesser lights which shall come to shine in the fullness of time with a brightness which shall shed glory on the profession of medicine, and shall bring with it better and well-deserved material rewards.

When proper legislation is to be effected, in which the medical profession is concerned, it is to sound a clarion note to be heard of all physicians in the Commonwealth, whose combined influence for the right would be irresistible. It is to be the medium of communication, in other words, between all members of the profession in the State, as high as the plane of the highest and best, and as low as the humblest member in the remotest hamlet.

Already such a journal has been established by a number of the States, as follows: New York, Pennsylvania, Michigan, Illinois, Kentucky, Missouri, Kansas, Colorado, California and New Jersey. Ohio and Texas have the matter under consideration. Representatives of many of these States met at Atlantic City, June 6th, and effected a preliminary organization of State Medical Journals, already referred to. Those in attendance on the meeting

were practically unanimous in declaring that the State Journal has been of the greatest service in promoting organization in the first place, and in holding it together in the second place.

There is certainly no reason why such a journal should not speedily become the best journal published in any State. It can, and should, command the services of the best men in the profession all over the State, and its quality will depend then only on the intelligent industry of its editors.

In Kentucky the experience of the State Journal has been most encouraging. From all over the State words of encouragement have come, and many who were at first opposed to the monthly publication, and felt themselves wedded to the old volume of transactions, after a year's experience, have come to regard the new way with approval. While the Journal has not received enough money from its advertisers to meet the expenses of publication and circulation it still has earned enough to more than meet these expenses when added to the subscription fees of the members of the Association.

The financial part of a publication of this kind seems to be the thing which causes the most concern in the minds of those considering the proposition. If a comparatively small State Association, like that of Kentucky, with about sixteen hundred members, can make such an undertaking succeed, would there seem to be any good reason why more populous States, some with a membership already of more than three thousand, should hesitate to make the venture? The editor of the *Kentucky Medical Journal* was asked to address the society of the State of New Jersey at Atlantic City in June last, on this very question. That society had almost made up its mind to adopt the journal plan of publication, but hesitated because of the fear of being plunged into utter financial ruin. After hearing the experiences of Kentucky and California the New Jersey society voted almost unanimously to begin the publication of a State Journal, and we understand it is now about ready to be launched.

NOTES.

Dr. J. M. Poyntz, of Richmond, died at the home of his sister, Mrs. Anne E. Bean, near Mt. Sterling, at 7 o'clock a. m., August 16th. His death removes from Eastern and Central Kentucky a man among men. He was a man of the strictest integrity and honor, and was one of nature's noblemen. He was widely known and greatly beloved for his genuine friendship and loyalty.

* * * * *

The fifth annual meeting of the American

Roentgen Ray Society will be held at St. Louis, September 9, 10, 12, and 13. The sessions will be held in the morning only at the Louisiana Building, 911 North Vandeventer Avenue. Hotel headquarters will be at the Grand Avenue Apartments, Grand Avenue and Morgan street.

An exhibition of X-ray prints and also of the most modern X-ray apparatus, will be an important feature of the meeting.

A Kentuckian, Dr. James B. Bullitt, of Louisville is president of the society this year, and assures all interested Kentuckians who come to the meeting, a hearty welcome.

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The American Obstetrical and Gynaecological Association will meet in St. Louis, September 12, 13, 14, and 15. Headquarters and the sessions will be held at the Monticello Hotel. The sessions will be held in the morning only.

PROGRESS IN THE SPECIAL DEPARTMENTS OF EYE, EAR, NOSE AND THROAT.

Under the charge of ADOLPH O. PFINGST, M. D.

LARYNGEAL STENOSIS FROM POST-TYPHOID PERICHONDRITIS.

Chevalier Jackson, M. D., and Ewing W. Day, M. D., Pittsburg, Pa., report two such cases in the *Annals of Otology, Rhinology and Laryngology*, March 1904. The first case, occurring in a laborer, aged 22, who during convalescence from a severe case of typhoid fever suddenly became hoarse and complained of pain on swallowing and some tenderness externally over the larynx. The laryngoscope revealed edematous swelling of the epiglottis and arytenoids. Intubation and scarification affording only temporary relief, the trachea was opened.

Inflammatory symptoms, associated with the perichondritis subsided in about ten days but upon withdrawal of the tube deep cyanosis followed. The vocal cords, upon inspection, were found to be obliterated and their places taken by thickened infiltrated cicatricial tissue. A narrow respiratory slit was visible only during forced expiration, with the tracheal tube closed.

The patient had to be given a general anesthetic, the thyroid and cricoid cartilages split down to the thacheotomy wound and the entire contents of the larynx down to the thyroid perichondrium clipped out and a large mass of granulation tissue on the back wall of the trachea removed.

The tracheal cannula was worn for about a month then an aluminum intubation tube used

for two months. The patient made a complete recovery with restoration of his voice.

The second case was similar to the first. It occurred in a male, twenty-five years old, a severe case of typhoid being complicated, first with a double pneumonia, then with middle ear suppuration and mastoid abscess and finally with laryngeal stenosis. On the 65th day of the typhoid tracheotomy had to be resorted to on account of dyspnoea and cynosis. There was deep laryngeal ulceration and marked edema.

The edema and inflammatory symptoms subsided after the operation and in about five weeks the ulcerations had healed. There remained, however, a complete laryngeal stenosis due principally to cicatricial bands. After the patient had recovered his strength the larynx was split by incision through the thyroid cartilage and the operation carried out as in the first case. This patient also made a complete recovery.

* * * * *

A CASE OF ACUTE EDEMA OF THE LARYNX COMPLICATING ARTICULAR RHEUMATISM

is reported in "*The Laryngoscope*," April 1904 by Thomas J. Gallaher, A. M., M. D., of Denver, Colo., who believes that the larynx is more commonly involved in rheumatism than is generally supposed. Gallaher's case occurred in an adult during a violent case of acute articular rheumatism. On the tenth day the patient suddenly began to breathe with great difficulty, for the immediate relief of which intubation was resorted to. Laryngoscopic examination revealed enormous watery swelling of the epiglottis, aryepiglottic folds and the ventricular bands, making it difficult to retain the tube. It was expelled six times and reintroduced before the patient could do without it. At the end of sixty hours respiration could be carried on without the tube although considerable swelling was present in the larynx for four or five more days and the parts did not return to normal for about a month. His other treatment consisted of saline cathartics and inhalations of compound tincture of benzoin vaporized.

The patient had been given some salicylate of soda before appearance of the edema but he had taken no iodides. There were no cardiac lesions or evidences of renal trouble.

The author prefers intubation in these cases—passed with the aid of the laryngoscopic mirror—in hospital practice but believes the danger of expulsion of the tube and rapid death so great that tracheotomy should be preferred when the patient is not directly under the care of some one who can quickly reintroduce the tube. He does not favor scarification believing that it increases the danger of deeper infection. He also considers adrenalin

useless, in fact, considers it harmful on account of the secondary reaction.

* * * * *

THE SURGICAL TREATMENT OF MASTOID ABSCESS WITH EXTENSION OF THE DISEASE BENEATH THE MASTOID PROCESS.

Bezold Mastoiditis is discussed in *Knapp's Archives of Otolaryngology*, June 1904, by Dr. Ferdinand Leimer. He observed seventeen cases of Bezold Mastoiditis in nine years. Nearly all of them occurred after the third decade of life, and especially in the fifth. He accounts for the infrequency of this form of mastoiditis in children in the anatomical conditions. The mastoid cells are always poorly developed in the early period of life and increase in size with the age of the individual. Since experience has taught us that the presence of large cell spaces in the bone predisposes to perforation into the digastric fossa we can readily understand why the form of mastoiditis under discussion is seen mostly in advanced life.

The pronounced changes in these cases are usually below the tip of the mastoid. There is rarely much tenderness or swelling over the region of the antrum but just below the insertion of the sternocleidomastoid and from there extending to the region below the mastoid process there is more or less redness, swelling and tenderness on pressure. The inflammatory swelling sometimes extends backward as far as the median line. In rare instances the inflammation terminates in the formation of a superficial abscess at some remote point. The time at which the swelling below the mastoid appears varies from several days to several months after the beginning of the acute symptoms.

The indication for operation is given by the presence of the characteristic swelling and the prolonged febrile condition, following history of middle ear disease of long standing. The mastoid is attacked first at the tip, thereby severing the muscle at its insertion. The cortex is then removed and the antrum exposed, and finally the rest of the mastoid process is removed.

In nearly all of the cases the outer wall of the mastoid bone was found to be dense and compact while the inner wall was thin and fragile. The author had two deaths in his 17 cases, an average mortality of 13.3 per cent., compared to 8.8 per cent. in simple mastoiditis. The cured cases nearly all recovered their normal hearing.

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TEMPERATURE AFTER THE MASTOID OPERATION.

This question is taken up in the May issue of the *Annals of Otolaryngology, Rhinology and Laryngology* Dr. Thomas J. Harris, New York. In going over the last 100 cases of simple, uncomplicated cases of mastoid abscess operated

upon at the Manhattan Eye and Ear Hospital, he found only one in which there was no elevation of temperature following the mastoid operation. It usually ranged from 99 to 102 degrees and varied in duration from 2 to 19 days, 6.6 being the average. The highest elevation was usually noted on the second day. As these cases all ran an uncomplicated course, the question naturally arises as to how much importance should be attached to this post-operative elevation of temperature and as to its cause.

It has been suggested that the elevation of temperature is but a continuation of the temperature before the operation. However, it is not uncommon to encounter cases which run no temperature until after the operation.

In the opinion of Harris the rise in temperature is of bacterial origin, although this can not be asserted positively until a large number of cases are submitted to a bacteriological examination. It hardly seems plausible that lack of asepsis causes the temperature for we know that patients treated by aural surgeons who little heed the ordinary rule of asepsis have practically the same results as the more careful surgeons.

The author also noted in his 100 cases that after the third or fourth day the cases of long continued fever, the temperature ranged between 99 and 100 degrees, seldom reaching over 101 degrees.

From his observations the author deducts the following conclusions:

- 1st. Post-operative temperature of moderate amount is customary in mastoiditis.
- 2nd. Its cause has never been definitely determined.
- 3rd. Without other symptoms, it is without significance and should not be a source of anxiety.

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A CASE OF RECURRENT PARALYSIS OF THE THIRD NERVE.

Reported by L. Werner. F. R. C. S. Dublin, in the *Ophthalmic Review*, May 1904. A girl of 20 years, gave a history of frequent and severe frontal and temporal headache on the right side since childhood and frequent attacks of biliousness.

Three years ago other severer symptoms developed. On the second day of an attack of headache the upper eye-lid of the right eye began to droop and in 24 hours was completely closed, remaining so for about six weeks.

Her stomach was considerably deranged during this time, the saliva dribbling from her mouth both day and night. Two years later she became similarly affected—she first saw double and then the lid drooped for three weeks, during which she again had a "bilious" attack as during the first attack. Seen between

the attacks there was dilation of the right pupil and inability to read.

This is, in the opinion of the author, a case of recurrent paralysis of the third nerve. The persistence of an internal ophthalmoplegia between the attacks stamps the case as belonging to the periodically exacerbating variety of the disease. Little is known of the pathology of this disease. An accumulation of toxins from constitutional or other causes would probably best explain the symptoms in the majority of cases. It may be the result of gastro-intestinal derangement, probably the cause of the bilious attacks in our case, or it may be introduced from without or be produced in other parts of the body, the gastric disturbance being secondary. The toxic substances in turn affect the nerve centers.

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PARINAUD'S CONJUNCTIVITIS.

By Dr. F. H. Verhoeff and Dr. G. S. Derby, Boston: *Knapp's Archives of Ophthalmology*, July, 1904.

A rare form of conjunctivitis was described in 1889 by Parinaud which is now known as Parinaud's conjunctivitis. It is characterized by the formation of red and yellowish vegetations, at first semi-transparent and later opaque, on the palpebral and ocular conjunctiva. The lids are swollen and feel nodular. The local condition resembles in the beginning granular conjunctivitis but later it differs from all other forms of conjunctivitis. A characteristic feature of the disease is the involvement of the parotid gland, which becomes much enlarged. The lymphatic glands of the neck are sometimes also enlarged.

The patient suffers from fever and irregular chills. The disease runs its course in from two and one half weeks to five months. The glandular swellings subside or terminating in abscess formation.

Since Parinaud's original case was described 22 additional cases have been reported. The cases with but two exceptions were unilateral. Bacteriological investigation has failed so far to find a specific germ for the disease. Parinaud believes the disease to be of animal origin, as there was some sort of animal contact in most of the cases reported. The treatment employed consisted in the use of weak antiseptic collyria to prevent secondary infection and in early and repeated incisions of the conjunctival vegetations. The glandular conditions are best treated by the local application of heat and in case of abscess formation by incision and drainage.

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THE EPIDEMIC OF SO-CALLED TRACHOMA.

The so-called trachoma which during the past year or more has been the source of much anxiety in New York and to a

lesser extent in the country at large, is discussed by Dr. Elise M. Alger, of New York, in the *New York Medical Journal*, of April, 1904. The author believes that the disease described as Trachoma in the recent epidemic was not true Trachoma but follicular conjunctivitis. In the early stage of these two affections it is sometimes impossible to differentiate between them, consequently some authorities explain follicular conjunctivitis as being a kind of trachoma distinguished by its mildness. In the progress of the two diseases the diagnosis is not difficult.

Trachoma, always due to an infection, leads to papillary hypertrophy of the conjunctiva, causes shrinkage of the conjunctiva and pampus, and numerous sequelae secondary to the shrinkage. In follicular conjunctivitis which may, and usually does, arise without infection, the follicles of the early stage ultimately disappear without leaving a trace behind.

In New York during the epidemic twenty-five per cent of the children were suffering from an eye affection which was called trachoma. The affection was identical with that of the immigrants, many of whom were not allowed to land in this country. The subjective symptoms of real trachoma were not present. The patients did not complain of gluing of the lids, photophobia, a sensation of sand in the eye, the upper lids did not droop and there was no purulent discharge. There was also no thickening of the conjunctiva and subsequent formation of scar tissue and the ordinary sequelae of trachoma, as ptosis, entropion or ectropion. The cases were almost typical of follicular conjunctivitis as described by Fuchs. He says follicular catarrh is characterized by the presence of follicles. These are small, round granulations of about the size of a pin head, which lie in the region of transition of the conjunctiva. They are of a pale translucent aspect and puff up the conjunctiva in the form of small eminences. Either a few follicles only or many may be present, in the latter case they are ordinarily arranged in rows like beads in a rosary. The disease, in spite of its long duration, has a good prognosis in that it is cured without leaving any sequelae.

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A NEW METHOD FOR THE APPLICATION OF LOCAL ANESTHESIA IN OPERATIONS ON THE EYE BALL AND EYE LIDS.

Described by J. Guttman, of New York, in *Knapp's Archives of Ophthalmology*, May, 1904. In 1885, Oberst introduced a method of bringing about local anesthesia in general surgery by infiltrating the tissues about the peripheral nerves supplying the parts to be operated upon. This regional paraneurial infiltration method has never been applied in ophthalmic surgery until

Guttman conceived the idea of using it for the operation of squeezing out the granules of trachoma and thereby doing away with the general anesthetic. A 4 per cent. solution of cocain is instilled into the eye and three or four minutes later the following solution is injected with a hypodermic needle: soda bichlorid 0.2, cocain 0.05, aqua destill 100. The upper lid is everted and the retrotarsal fold exposed by turning the everted lid still further with forceps. The needle is then introduced near the upper margin of the cartilage paralled with it and so superficial that the needle is just barely covered. Also soon as four or five drops of the solution is injected a grayish-white wheal is formed. The needle is withdrawn and again introduced within the border of the first wheal. This is continued until the entire conjunctiva raised and infiltrated. The trachoma granules are then more prominent and plainly visible and can easily be attacked with roller forceps, usually without pain. As the lower lid can readily be exposed on its entire conjunctival surface it can be rendered anesthetic easier than the upper.

This method was employed in fifty-two consecutive cases of trachoma in patients ranging from one year upward, the majority being in children. Pain was complained of in only eight of that number and in no case was the author compelled to discontinue the operation or substitute a general anesthetic.

The method was employed by its author in operation for squint, extirpation of lid tumors, opening of lachrymal abscesses, etc., by injecting cocain from without but its special value lies in its application for the trachoma operation. It offers advantages over local anesthesia obtained by instillation of cocain in being painless during and after the operation and over general anesthesia in being devoid of danger and in having no bad after effects.

In concluding his report, Guttman expresses the hope that his method will entirely eliminate general anesthesia from ophthalmic surgery.

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EXTIRPATION OF THE LACHRYMAL SAC.

In the July issue of *Archives of Ophthalmology* Dr. Frank C. Todd, Minneapolis, suggests the injection of the lachrymal sac with paraffine to facilitate its extirpation.

The indications for extirpating the sac are: 1. In cases of suppurating dacryocystitis where an eye ball operation such as iridectomy or cataract extraction has to be performed; 2. In cases of dacryoblenorrhoea, where the customary treatment of probing and syringing fails to cure; 3. In those who cannot endure probing; 4. In cases of acute dacryocystitis recurring after supposed cure; 5. In some cases of lachrymal fistula; 6. In cases

of dacryocystitis occurring in patients whose occupation subjects them to corneal injury (machinists.)

Extirpation of the sac performed in the classical manner is not a simple procedure on account of hemorrhage and on account of the indefinite outline of the sac. The operation consumes considerable time and the surgeon is in doubt whether the entire sac has been removed. It requires the administration of a general anesthetic. Todd's method is described as follows: After the patient has been properly prepared, the contents of the sac are pressed out through the canaliculus: the sac is then thoroughly and repeatedly irrigated with boric acid solution and also with argyrol. By means of a suitable syringe, paraffine, prepared for surgical use with a melting point of 110 degrees, is injected through the lower canaliculus into the sac until it is completely filled. This at once hardens and the sac is thus easily outlined. An incision is made in the skin over the sac in its long axis, extending from one-quarter of an inch below the dome way down to the lower extremity of the swelling. The sac is exposed, can be easily seen and dissected out by means of a knife, dull instruments and scissors. It should be followed well down into the duct; if it is button-holed no damage is done, as the paraffine is hard and will not escape.

Any necrosed bone found should be curetted and drainage will take place into the nose. The skin is sutured and the canaliculi destroyed afterwards by canterization. If a general anesthetic is administered the head may be dropped over the end of the table to prevent the entrance of blood into the larynx. If cocain is used some should be injected into the sac previous to the injection of paraffine; and before making the incision the skin is anesthetized by the infiltration method.

CHEMICAL EXAMINATION OF DISEASED KIDNEYS.

It is a peculiar fact, emphasized especially by A. Orgler (*Virchow's Archiv.*, Vol. 176, No. 3) that the chemical examination and microscopic appearance of pathological kidneys does not always correspond. Thus the microscope may give evidences of advanced fatty degeneration, while less fat will be found chemically than in normal organs. The author believes that many of the highly refractive granules that are looked upon as fat are not really fat, but protagon, a proteid, which also reduces osmic acid to some extent. Nominally this protagon is contained in the cell in chemical combination with another proteid, which is destroyed by autolysis so that the protagon crystallizes out.

COUNTY SOCIETIES.

[Secretaries of county societies are requested to furnish for this column, and without further notice, all county society news of interest, such as the date and place of the monthly meeting, notice of death and marriage, epidemic disease, and, in fact, everything which might be of interest to brother practitioners in the State.]

The *Anderson County Medical Society* met at Lawrenceburg, August 1st. Physicians present, C. W. Kavanaugh, President; C. W. Paynter, George E. Davis, J. L. Toll, G. D. Lillard and J. M. Jennings.

Dr. J. L. Toll read a very interesting paper on "Treatment of Typhoid Fever," which was discussed by all the members present.

Dr. G. D. Lillard's paper, "Non-inflammatory Diarrhoea" was highly commended by the society. Discussion general.

The next meeting will be held at the office of Dr. O. L. Townsend, at Orr, Ky., on September 4th.

J. M. JENNINGS, Sec'y.

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The *North Kentucky Medical Society* and *Grant County Medical Society* met

at Williamsburg, Ky.,

Thursday, Aug. 11, 1904.

Reading of Minutes.

Reception of New Members..

1. Summer Diarrhoea in Children, by Dr. B. A. Dulaney, Florence. Discussion by Dr. L. W. Bagby, Walton.
2. After Treatment of Abdominal Sections, Dr. G. F. McKim, Cincinnati. Discussion by Dr. T. A. Reamy, Cincinnati.
3. Tumors Complicating Pregnancy, Dr. Edwin Ricketts, Cincinnati. Discussion by Dr. C. L. Bonifield, Cincinnati.
4. Intestinal Obstruction, Dr. Robt. Carothers, Cincinnati.

Report of Clinical Cases.

Unfinished Business.

New Business.

DR. B. K. MENEFFEE, Pres't.,
Walton, Ky.

DR. W. J. ZINN, Sec'y.,
Williamstown, Ky.

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The *Henderson County Board of Health*, under the 1904 amendment, organized July 26, 1904. The Board is composed of Judge J. H. Hart, Dr. M. C. Dunn, chairman; Dr. Silas Griffin, Health Officer, and Drs. R. H. Moss and H. B. Powell.

SILAS GRIFFIN, M. D.
Sec'y. and Health Officer.

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The *Monroe County Medical Society* met at the Clancy House, Tompkinsville, Ky., Thurs-

day, July 21, 1904, with eight members present. An unusually large clinic presenting the regular program was dispensed with and the whole time given to ministering to the wants of the clinic. Dr. England presented a most interesting case of a white woman, thirty years old, married four years. The patient never menstruated until she was twenty years of age, and never regularly at all, but had the periodical disturbances from her fifteenth year, pain being the most prominent symptom. Examination revealed a vaginal canal 1 1-2 inches long; no uterus or appendages could be found, either by vaginal or rectal examination, or by palpation. An exploratory operation was done revealing, or rather opening up a vaginal canal seven inches in length with infantile uterus to left of medium line. The partition wall in the vaginal canal was imperforate, though not an imperforate hymen, remains of hymen being plainly seen, elastic and about an eighth of an inch in thickness. How the woman had ever menstruated is a mystery as there was no sign of any perforation whatever.

Our meeting was a most enthusiastic one.

E. E. PALMORE, Sec'y.

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The *Scott County Medical Society* met on August 4th, and endorsed the Journal of the Kentucky State Medical Association as the official organ of the society. The society meets every two months and the secretary is instructed to report the proceedings of the meetings to the Journal. We congratulate the Journal on its great success.

Dr. Knox presented a very creditable paper on "Malaria" at the last meeting of the society.

W. H. COFFMAN, Sec'y.

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The *Taylor County Medical Society* met in regular session, August 4th, 1904, at Mammsville, Ky., Dr. J. L. Atkinson presiding. The regular routine of business was disposed of. The following papers were then read and discussed:

"Infant Feeding," by J. L. Atkinson.

"Dysentery," by O. M. Kelsey.

"Summer Diarrhoea of Infants," by J. B. Buchanan.

"Typhoid Fever," by H. G. Sanders.

On motion the Kentucky Medical Journal was declared the official organ of the Taylor County Medical Society.

Drs. G. W. Prewitt and Shelby H. Kelsey were received as members.

J. B. BUCHANAN, Sec'y.

* * * * *

The *Trigg County Medical Society* met at Cadiz, on Saturday, August 13, 1904, to effect a more complete organization of the profession of the county. Dr. James H. Lackey, of Canton, is President, and Dr. Homer Blane, of

Cadiz, is Secretary. Nearly every physician of the county was in attendance. Dr. J. N. McCormack, of Bowling Green, was present as a guest.

After full discussion and consideration the standard constitution and by-laws were adopted and every member present paid the dues to the State Association.

After an interesting program had been arranged for future meetings an elegant dinner was served.

ENTERO-COLITIS.*

By C. P. HARVILLE, DANVILLE, KY.

Mr. President and Members of the Central Kentucky Medical Society.

The term Entero-Colitis is an old one and seldom in use nowadays. Years ago it was considered by Meigs, Billard and others to be an inflammation of the intestinal tract with its attendant lesions, viz., softening, thickening, pseudo-membranous exudation, ulceration and gangrene.

In the many years which have passed since the day of older authorities, and during which great progress has been made in scientific research, we have been enlightened by this fact—that it is an affection confined chiefly to the lower portion of the ilium and upper part of the colon; therefore my preference for one of its symptoms, ilio-colitis, which I believe is a more fitting term, as we only find the pathological changes taking place in the exact locality designated by the latter term.

Entero-colitis, as this is the subject of my paper for the time being, is a catarrhal inflammation of the lymph follicles and in which we find a great tendency toward ulceration, hence another synonym, follicular enteritis, or follicular dysentery. It is essentially, though not necessarily, a disease of childhood; seldom seen beyond the fifth year until the approach of old age, when it again comes into prominence. And here let me mention that the word childish, so often used when in reference to the aged, is not amiss, for each of us knows how very child-like aged people become—not alone in disposition, desire and temperament, but we find so many diseases common to both. In the aged we see a state of general decline, debility, and in many cases almost a complete state of muscular atony, which is similar to the undeveloped muscular structure of a child. Again, when we think of the chief causes of an acute entero-colitis being overfeeding, undigested food, exposure and temperature, I feel no hesitancy in making the above statement and comparison.

The most frequent and chief causes of an acute entero-colitis, are over-feeding, which

is too rich and too solid in its consistency, and an unhealthy character of the milk of the nurse. When the granules which exist as a physiological element in the colostrum secreted during the first few days after childbirth, continue to be secreted after that period the infant is almost certain to suffer from an acute entero-colitis, and not infrequently die unless weaned or transferred to another nurse. It is also said when the mammary secretion is acid instead of alkaline; when it contains mucus, or pus globules; when the nurse is liable to vivid, moral emotions of any kind, or when addicted to the use of intoxicating drinks, a diarrhoea is apt to follow.

Rilliet, Barthez and Trousseau all agree that one cause apt to exert the strongest influence is dentition; that the evolution of the teeth, though being a physiological process, is a powerful predisposing cause of diarrhoea and enteritis and cannot be doubted at the present time. They claim that careful investigation will show nearly all cases of inflammation and softening to date from the epoch of dentition, from the period of weaning, or at the time from which some considerable change in the character of the regimen was made.

Bouchut states that of one hundred and ten children in whom dentition was going on, twenty-six escaped any indisposition; thirty-eight suffered from restlessness, colic and an occasional diarrhoea, so mild as to excite no alarm in the parents, while forty-six had abundant diarrhoea. In nineteen of the last series it appeared incidently with the fluxion of the gums, occurring at the time of emergence of each tooth and disappearing entirely in the interval. In the remaining twenty-seven, in all of which the process of dentition was difficult, the diarrhoea persisted and gradually assumed the character of entero-colitis.

Legendre and Bartier both agree in ascribing very great effect to the influence of dentition in the production of diarrhoea and entero-colitis. The former asserts the disease referred to to be much the most frequent between the ages of six and seven months and two and two and a half years, which includes exactly the period occupied in the first dentition, while they are only met with exceptionally after three years of age.

The act of weaning is very apt to result in the production of either simple diarrhoea or entero-colitis, in consequence, no doubt, of the irritation set up in the gastro-intestinal surface by the change of food made at this time.

Dr. Stokes (Cyclop. of Med. Art. Entero-Colitis) says of this disease that "it is manifestly an acute enteritis produced by the change of food, and in which nature seeks to relieve the inflammation by a super-secretion."

Besides the above causes, may be mentioned

*Read before the Central Kentucky Medical Society, Crab Orchard, July 21, 1904.

impure air and summer temperature, any form of irritation such as toxins from fermentation, and a gastritis which has gone from bad to worse. Bacteria seem to play an important role in many cases. The normal colon bacillus probably being the most frequent of a non-specific enteritis, and it may under certain conditions increase its virulence to cause quite a degree of irritation; other bacteria of the intestinal tract no doubt may form part of the contributing cause. We will occasionally see cases, to all appearances and so far as we are able to investigate, caused by uncleanness and exposure to cold or damp air. Anyway, these two certainly act as strong predisposing factors.

Enterocolitis is prone to occur as a secondary affection in many of the acute diseases of children. It is by far the most common in the course of the eruptive fevers, particularly measles. Whatever the cause or causes, no matter how varied and obscure, we find this pathological result in every case reverting to the production of the initial lesion, irritation preceding this inflammatory condition. As an altered or pathological change, resulting from the above causes, we find hyperaemia, oedema, softening of the mucous membrane of the lower end of the ilium and upper part of the colon with a hyperplasia of the intestinal follicles, the excretory portion enlarged and tumid, easily and readily distinguished as grayish or blackish points in the middle of the glands.

Peyer's patches are also enlarged and project above the surrounding mucous membrane, while orifices also appear as black points. These patches appear to have an ulcerated condition, but upon closer investigation no ulceration has been found to take place. We therefore see this intense, inflammatory, irritable and oedematous condition existing which give us the following symptoms and these may appear in a most varied and deceptive manner: The patient may cause first notice of its parents by becoming fretful, disliking food, and bothered with a mild diarrhoea, or it may have a complete anorexia, temperature, nausea, vomiting, abdominal tenderness, and diarrhoea a little later on, or again an exaggerated condition of both with a sudden onset. No difference how obscure and baffling this condition may seem at first, the stools will soon present the characteristic appearance, being semi-fluid and greenish, of an acid nature, and mixed with yellow fragments of faeces and undigested casin. The abdomen is enlarged and tender. Such a case usually runs its course from ten days to two weeks, and terminates in recovery or assumes a chronic nature which, while the severity of the symptoms is less, the condition becomes persistent, holding on to the patient and last-

ing from one to three months and even longer. The patient having from six to twelve stools during the day and night, consisting of products of imperfect digestion mixed with mucous, and very often blood; the odor of such a stool being the most offensive kind. The patient is sallow, greatly emaciated, and resembles a clinical picture of a recuperative typhoid.

The diagnosis of an acute enterocolitis is hardly confounded with that of simulating diseases, if the characteristic stools and abdominal tenderness are present together with the age, environments and season of the year.

Acute enterocolitis, existing as it does in the majority of diarrhoeas, gastro-enteritis, dysentery, and cholera-infantum, and the many and different causes leading to the production of such a disease, stamp it as one of the most frequent and by far most fatal diseases of childhood, and upon existing lesions, the causes of such a production—age, strength, nature of pulse and nervous system, number of stools in twenty-four hours, and hygienic surroundings—can we alone venture a prognosis. It is favorable more in patients whose strength and vigor surpass that of the more unfortunate, whose age is three years instead of six months, whose stools number four instead of ten in every twenty-four hours, in one who has passed through its first dentition, than in one who has not undergone this physiological process; and also more favorable in one who has been nursed at the breast of a healthy mother than in one who has been poorly and artificially fed. Good hygienic surroundings also lend a helping hand toward a favorable termination, and of course much better is the prognosis in those where no previous existence of malnutrition or rickets, those not recently weaned or not having had earlier in the season diarrhoea, or in fact any existing complication—broncho-pneumonia being one of the most frequent.

The symptoms constituting an unfavorable prognosis are those opposite to what have just been enumerated as necessary for recovery of acute enterocolitis, and in addition the following—to which is attached great stress and importance—continued high temperature, frequent vomiting, rapid wasting, and excessive amount of blood in the stools, severe nervous symptoms, and a very weak pulse. According to Holt, Starr, Thompson and others, these cases are never out of danger until the end of the hot season, on account of the great liability to relapses and recurrent attacks.

Now, coming to the treatment, let us consider the prophylactic, the hygienic, the dietetic and the medicinal; all of which must be carried out in a radical, yet careful manner. Special attention should be paid to the early and energetic treatment of all the milder

forms of diarrhoea and particularly the cases of acute gastro-enteric infection in order that the process may be arrested before serious anatomical changes have taken place.

So far as hygienic treatment is concerned, utmost cleanliness must prevail in the management of a case. A change as soon as the inflammatory symptoms have subsided is greatly beneficial, some patients obtaining great relief and improvement in a mountainous altitude, while others do best at the seashore.

Keep patients away if possible until the last of the hot season, being about the end of September; never crowd your patient, but give it instead all the latitude possible.

The dietetic treatment should be the same as in gastro-enteric infection. If the case be that of a young infant, and possible, it should be nursed; if not, prepare food and nourishment which most closely resembles the natural ailment of the infants, such as water, milk and farinaceous substances. All broths, gruels, etc., should never be administered to children under eight months of age.

If called to see a case of entero-colitis in an infant at the mother's breast, and before the period of dentition, the simple direction not to allow it to nurse as much as usual; the use of the warm bath morning and evening—if the skin be heated and the child restless and fretful; the administration of a small dose of olive oil—one half to one teaspoonful—or syrup of rhubarb in same size dose with one-half to one drop of the deodorized tincture of opium followed in one or two days; if the disorder continues, with some simple astringent (chalk or bismuth), usually suffices to effect a cure. I prefer olive oil to castor oil. It has been largely the custom for many years past to use castor oil in many affections of childhood where a laxative effect was desired, but of late it has been scientifically investigated and clearly demonstrated that after the mild laxative effect castor oil produces, it assumes a new role, acting as an irritant, constipates and does not possess the soothing and healing properties characteristic of olive oil. I may also mention that the deodorized tincture of opium is decidedly the best and only form which should be administered to these young subjects, as it contains no narcotina and therefore is the least nauseating of the opium family. This I consider but proper and intelligent treatment. If the case be that of a child ten months or one year of age a good prescription is syrup rhubarb comp., syrup ipecac, bismuth sub. and listerine, each one drachm, and mist. creta., preparata, two ounces. Mft. Sig: One teaspoonful at a dose, and repeat as indicated for number of stools.

The medicinal treatment during the early stage, which is marked by vomiting and thin

diarrhoeal stools, should be restricted to purgation, irrigation of the colon and cessation of all food.

Apply hot applications to the abdomen, give plenty of stimulants—in the nature of brandy and give it between the feeding hours, the average interval of which should be three.

When the symptoms have subsided and a temperature of one-hundred or slightly above remains, it is wise to cease drugging your patient, paying attention instead to the food and stimulants; and a little later on commence with the administration of cod liver oil (and here I may add, I know of no preparation better than the emulsion), nux-vomica, iron and arsenic. At first you may encounter some temporary embarrassment in endeavoring to administer food to many of the patients, as they oftentimes create an anorexia, refusing everything offered in the nature of nourishment.

Having mentioned the dietetic treatment of infants, I shall mention the articles to be most depended upon in children one year of age and older—skimmed milk which has been completely peptonized, beef juice, and barley and rice water; in other words, food which leaves but little residue should be chosen.

Keep an accurate record of the exact amount consumed in the twenty-four hours, and when your patient is on the road to recovery (as we trust may be the case) then commence with the medicinal and reconstructive tissue building agents just referred to and continue their use throughout the following winter months.

Of course we will be called in to treat these cases of acute entero-colitis under different surroundings and existing hygienic conditions, which may not be of the best and aseptic type, but in every case it becomes our imperative duty, regardless of the environments of these little ones, to make ourselves equal to the emergency and utilize whatever treatment we may have best at our command, do what we intend doing for those suffering from this dreadful malady in a most radical yet scientific manner.

ACTION OF ROENTGEN RAYS.

Most observers believe that the skin is affected primarily and most strongly by the X-rays if a portion of the body is exposed to their influence, but G. Baermann and P. Linsler (*Munch. med. Woch.*, June 7, 1904), make the startling statement that the blood vessels react before the skin. All lesions of the skin and connective tissue are thus an expression of nutritive disturbance secondary to vascular alteration. The following experiments support this view: If a diseased area of the skin is excised the raw surface may be covered with skin-graft which will rapidly

heal in place. If the skin is first exposed to the Roentgen rays before it is transplanted the healing will be just as rapid, while an equal amount of exposure where the skin is not removed, will lead to superficial ulceration. One may even preserve the exposed grafts for two days in normal salt solution and then transplant them successfully on some other individual, showing that there is not the slightest loss of vitality. If a granulating surface is exposed and then covered with normal grafts, these will be cast off a few days later. The cornea of a rabbit will not be influenced by an exposure which causes falling out of the hair in other parts of the body, simply because the cornea contains no blood vessels. The blood itself does not seem to be affected by the X-rays for even prolonged exposure, both in vivo and in vitro, did not change the microscopical appearance or the hemolytic power. The most important systemic reaction after exposure is a slight increase in temperature and an increased metabolism, manifesting itself in an abundance of nitrogenous material in the urine.

THE CIRCULATORY SYSTEM IN RELATION TO THE CURABILITY OF TUMORS.

That tumors are more readily subjected to injury from without than normal tissues, because the circulating blood does not enter into close physiological relation with them, is the statement made by H. Ribbert (*Deutsche med. Woch.*, May 26, 1904). For tumors are not, like the regular organs, supplied by normally constructed vessels. The latter are simply tubes, made up in great part of endothelium, and not able to take part in blood pressure changes. Instead of branching like normal vessels, they constitute a network of interlacing canals. The size of these vessels, as regards their total area, is entirely out of proportion to the amount of tumor tissue supplied by them, for a large pedunculated growth may be nourished by a comparatively small vessel. The blood current is also slowed by the numerous sacculations and dilatations found in the course of these vessels. The rapid increase in size of certain tumors may be explained by assuming that the nutrient materials from the blood are entirely taken up by the tumor cells for purposes of growth and reproduction, as there are no other functioning powers to be supplied.

LARYNGEAL TUBERCULOSIS AND PREGNANCY.

The association between these two conditions has been considered intimate enough to warrant the induction of labor where tuberculosis of the larynx was present. R. Sokolowsky, (*Ber. klin. Woch.*, 1904, No. 27) reports

two cases where even this radical procedure failed in its effects and the disease progressed until the patients died within a few weeks after delivery. In one woman labor was induced during the eighth month, in the other during the sixth. In connection with two similar cases lately reported from another source, the author believes that the interruption of pregnancy is of no value unless done during the early months and women afflicted with tuberculosis laryngitis should be warned of their danger and a facultative sterility advised, in order that they may not become exposed to these grave possibilities.

The recent showing by the editor of the Ladies' Home Journal, of the enormous proportion of alcohol contained in many of the popular tonics, nerve restorers, and other well-advertised patent medicines, has at last roused the temperance people to action, or at least to words. At the annual meeting of the National Temperance Society, held at Ocean Grove, N. J., last week, resolutions were adopted calling upon the Board of Managers of the society to memorialize Congress not to issue any patent or proprietary rights to any one for any remedy, medicine, "cure," or other compound containing alcohol, opium, or other narcotic drug, and to make it obligatory that all proprietary or patent medicines shall be put up in bottle or package with a label on which are printed the ingredients of the preparation. Another petition to Congress was decided upon memorializing that body to appoint a licensed chemist in each State to analyze all proprietary preparations, so that the sale of medicines which contain spirits may be prohibited. —*Medical Record*, July 30, 1904.

L. Martel (*Loire medicale; Journal de medecine de Paris*, for June 19, 1904) considers an ingrowing toenail as causing a trifling wound, chronic on account of a foreign body at the edge of the nail and because of the difficulty of rendering the site aseptic. An important ætiological factor is the convexity of the nail, the flesh supporting the border gradually ulcerating and giving way. Shoes with pointed toes and high heels aggravate the condition and an hypertrophy of the nail ensues, rendering a cure more difficult.

The treatment consists in scraping the nail with a piece of glass in the middle and at each side till the matrix feels sensitive. Absorbent cotton or some similar substance may then be used for protection against the friction of the shoe. Martel reports that patients with shoes half split open on their arrival, have departed with soul and sole at ease after this simple treatment, and that he has not in four years performed the usual operation for an ingrowing nail.

GRADUATE NURSES' REGISTER.

NAME.	DATE AND PLACE OF GRADUATION.	ADDRESS.	TELEPHONE.
Miss Lucille Allen.....	1901—Good Samaritan Hosp., Cincinnati.	Richmond, Ky.	
Miss S. Tanner Anderson.....	1900—Norton Infirmary, Louisville.	3121 Brook, Louisville.	C 1288
Miss C. E. Abraham.....	1899—Gray Street Infirmary, Louisville.	117 W. St. Catherine, Louisville.	H 1283
Miss Mary A. Alexander.....	1891—Louisville City Hospital.	603 W. Oak, Louisville.	H 1922
Miss T. Alloway.....	1903—Louisville City Hospital.	108 E. Broadway, Louisville.	C 490
Miss M. M. Baker.....	1896—Louisville City Hospital.		H 1541
Miss Harriet Balzheiser.....	1901—Woman's Hospital New York.	108 E. Broadway, Louisville.	C 929
Miss Ida Beckman.....	1899—Good Samaritan Hosp., Lexington.	146 South Upper, Lexington, Ky.	H 217
Miss Viola J. Bines.....	1896—Jennie Casseday Infirmary, Louisville.	1828 Baxter Ave., Louisville.	C 929
Miss May Bell Bowyer.....	1898—Louisville City Hospital.	603 W. Oak, Louisville.	H 665
Miss Gertrude Breslin.....	1896—Louisville City Hospital.	Richmond, Ky.	C 871y
Miss Margaret Bridgers.....	1896—Norton Infirmary, Louisville.	421 W. Chestnut, Louisville.	C 490
Miss Edith Edwards Bush.....	1892—Louisville City Hospital.	1434 Sixth, Louisville.	C 1684
Miss L. C. Busch.....	1902—Norton Infirmary, Louisville.	218 E. Broadway, Louisville.	H 587
Miss Sue D. Caden.....	1899—Gray Street Infirmary, Louisville.	117 W. St. Catherine, Louisville.	C 512
Miss M. Cameron.....	1902—Good Samaritan Hosp., Lexington.	Box 217, Lexington, Ky.	H 1922
Miss B. Cameron.....	1894—Philadelphia Hospital.	108 E. Broadway, Louisville.	H 490
Miss Emma L. Cartwright.....	1896—Philadelphia Hospital.	108 E. Broadway, Louisville.	H 1541
Miss Nancy Cockrill.....	1902—Norton Infirmary, Louisville.	842 Cawthon, Louisville.	C 929
Miss Nancy Connoughton.....	1900—Norton Infirmary, Louisville.	Supt. University Hospital, Louisville.	C 1640
Miss Annie B. Cook.....	1903—University Hospital, Louisville.	1432 W. Broadway, Louisville.	H 3131
Miss Daisy Dean.....	1900—Norton Infirmary, Louisville.	326 Twenty-first, Louisville.	H 5487
Miss Katherine Dear.....	1904—University Hospital, Louisville.	Cor. 12th and Ky., Bowling Green, Ky.	C 125
Miss Elizabeth M. Dennie.....	1896—Norton Infirmary, Louisville.	934 Second, Louisville.	C 1271
Miss Bessie DeSha.....	1903—Chester Hospital, Pennsylvania.	1016 Fourth Ave., Louisville.	South 6402
Miss Dock.....	1903—Good Samaritan Hosp., Lexington.	177 S. Upper, Lexington, Ky.	H 874
Miss Marion Downs.....	1892—Philadelphia Hospital.	1016 Fourth Ave., Louisville.	C 192m
Miss Frances Eubanks.....	1901—Norton Infirmary, Louisville.	223 E. College, Louisville.	C 1880
Miss Nannie McD. Eustaphie.....	1902—Good Samaritan Hosp., Lexington.	175 N. Broadway, Lexington.	H 1788
Miss 'Amie H. Field.....	1903—Norton Infirmary, Louisville.	1810 Sixth, Louisville.	H 2883
Miss Elizabeth A. Forde.....	1903—University Hospital, Louisville.	920 Sixth, Louisville.	H 4161
Miss Lula Frily.....	1904—Norton Infirmary, Louisville.	1223 Second St., Louisville.	South 1491y
Miss Lena Fuhrman.....	1900—Good Samaritan Hosp., Lexington.	18 Park Place, Lexington, Ky.	H 705
Miss Ida S. Gardner.....	1896—Louisville City Hospital.	106 E. Kentucky, Louisville.	.661
Miss Jennie Gideon.....	1897—Norton Infirmary, Louisville.	222 E. Broadway, Louisville.	C 1210
Miss Dorothy Foster Gilmore.....	1899—Louisville City Hospital.	121 E. College, Louisville.	
Miss Frances Gilmore.....	1902—Norton Infirmary, Louisville.	216 Bailey Ave., Louisville.	H 5795
Miss Minnie B. Goodell.....	1903—Gray Street Infirmary, Louisville.	216 Bailey Ave., Louisville.	H 5795
Miss Grace Hambrick.....	1897—Louisville City Hospital.	Barlington, Ky.	
Miss Lizzie R. Hand.....	1898—Good Samaritan Hosp., Lexington.	545 E. Main, Lexington, Ky.	H 1381
Miss Mary L. Harbison.....	1895—Norton Infirmary, Louisville.	545 E. Main, Lexington, Ky.	H 4150
Miss Nancy Harris.....	1898—Louisville City Hospital.	603 W. Oak, Louisville.	C 490
Miss Mary Harris.....	1903—Good Samaritan Hosp., Lexington.	310 W. High, Lexington, Ky.	H 1585
Miss S. Hayden.....	1903—University Hospital, Louisville.	752 Third, Louisville.	H 5262
Miss Nannie Head.....	1900—Good Samaritan Hosp., Lexington.	812 W. Maxwell, Lexington, Ky.	H 824
Miss E. B. Herbert.....	1900—Good Samaritan Hosp., Lexington.	812 W. Maxwell, Lexington, Ky.	H 824
Miss B. M. Hughes.....	1903—University Hospital, Louisville.	752 Third, Louisville.	H 5492
Miss Ida Hulette.....	1896—Good Samaritan Hosp., Lexington.	510 N. Broadway, Lexington, Ky.	H 1002
Miss Lou Hurly.....	1903—Louisville City Hospital.	108 E. Broadway, Louisville.	H 1541
Miss Emma Isaacs.....	1901—Good Samaritan Hosp., Lexington.	540 E. Main, Lexington, Ky.	H 1381
Miss Violet T. Joyce.....	1897—Norton Infirmary, Louisville.	1302 W. Broadway, Louisville.	C 2860
Miss Daisy B. Joyce.....	1902—Norton Infirmary, Louisville.	218 E. Broadway, Louisville.	C 512
Miss Frances L. Long.....	1902—Norton Infirmary, Louisville.	518 E. Broadway, Louisville.	C 512
Miss Bernice Martin.....	1899—Norton Infirmary, Louisville.	730 Second, Louisville.	C 8666
Miss Mary McCann.....	1901—Good Samaritan Hosp., Lexington.	40 Barr, Lexington, Ky.	H 605
Miss Mollie McMaster.....	1898—Good Samaritan Hosp., Lexington.	371 S. Upper, Lexington, Ky.	H 750
Miss Agnes McNally.....	1900—Norton Infirmary, Louisville.	408½ E. Broadway, Louisville.	CS 1250
Miss Laura Meyers.....	1903—Chester Hospital, Pennsylvania.	1016 Fourth Ave., Louisville.	S 6493
Miss Sarah Miller.....	1904—University Hospital, Louisville.	901 Eighth St., Louisville.	H 5802
Miss Mabel L. Pomeroy.....	1903—Norton Infirmary, Louisville.	1228 Second St., Louisville.	S 1491y
Miss A. A. Milward.....	1904—Norton Infirmary, Louisville.	Norris & Stevens Aves., Louisville.	CE 570
Miss Beatrice Moore.....	—Norton Infirmary, Louisville.	545 E. Main, Lexington, Ky.	H 1612
Miss Elizabeth Morton.....	1902—Good Samaritan Hosp., Lexington.	177 S. Upper, Lexington, Ky.	H 874
Miss Hallie E. Mosby.....	1903—Good Samaritan Hosp., Lexington.	182 E. Sixth, Lexington, Ky.	T 1341
Miss Katherine O'Connor.....	1897—Norton Infirmary, Louisville.	104 E. Broadway, Louisville.	(both) 750
Miss Jo O'Connor.....	1899—Norton Infirmary, Louisville.	421 W. Chestnut, Louisville.	C 3771
Miss Maud Pecar.....	1896—Louisville City Hospital.	108 E. Broadway, Louisville.	C 217
Miss Susan Belle Porter.....	1901—Norton Infirmary, Louisville.	1169 Sixth, Louisville.	C 929
Miss Annie Reece.....	1899—Kingston Gen'l Hospital, Ontario.	210 W. Oak, Louisville.	H 2182
Miss F. G. Relf.....	1892—Norton Infirmary, Louisville.	805 W. Chestnut, Louisville.	(both) 714
Miss Emily B. Richardson.....	1889—Norton Infirmary, Louisville.	108 E. Broadway, Louisville.	H 217
Miss Grace Robertson.....	1902—Gray Street Infirmary, Louisville.	1022 Second, Louisville.	C 929
Miss E. F. Shawner.....	1901—Kingston Gen'l Hospital, Ontario.	210 W. Oak, Louisville.	H 3371
Miss C. Shoemaker.....	1900—Good Samaritan Hosp., Lexington.	431 North Lime, Lexington, Ky.	H 2182
Miss Lillian Smith.....	1899—Louisville City Hospital.	108 E. Broadway, Louisville.	H 217
Miss Mattie J. Steilberg.....	1902—Good Samaritan Hosp., Lexington.	Kentucky Ave., Lexington, Ky.	T 1835
Miss Carrie Stowers.....	1898—Louisville City Hospital.	2225 Magazine, Louisville.	H 4536
Miss Mary E. Taylor.....	1901—Good Samaritan Hosp., Lexington.	431 N. Lime, Lexington, Ky.	H 1469
Miss Pearl Trumbo.....	1904—St. Luke's, Chicago.	406 E. Chestnut, Louisville.	Main 35194
Miss Julia Z. Watts.....	1901—Good Samaritan Hosp., Lexington.	431 N. Lime, Lexington, Ky.	H 1469
Miss Beatrice Young.....	1903—Norton Infirmary, Louisville.	210 W. Oak, Louisville.	H 2182
	1901—McMurtry's Infirmary, Louisville.	405 W. Broadway, Louisville.	C 439

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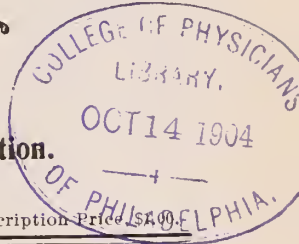
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NO. 5.

CYSTIC TUMOR OF LONGITUDINAL FISSURE OF LIVER, INVOLVING RIGHT AND LEFT LOBES, WITH DISLOCATION.—RE- PORT OF AN OPER- ATED CASE.*

By D. C. BOWEN, M. D., NOLIN, KY.

If your essayist in the report of this case will have interested his fellows sufficiently to bring forth a discussion on the individual methods of performing hepatectomy, and anchoring floating liver, he feels that the purpose of this paper will have been realized.

We do not desire to enter upon the broad subject of hepatic surgery, but wish to state that from suppurative-repatitis to biliary lithiasis, from hydatid cysts to possibly malignant growths of liver, a vast field has been opened up and is being invaded, and in the main is conquered by modern surgery. Drs. Semmola and Gioffredi, of Naples, in Twentieth Century Practice of Medicine, say that, "Since Lister gave the impetus to the enormous progress made by surgery, even hepatic diseases have come within the reach of this form of treatment; we may even say that at the present time surgery is triumphantly taking possession of this field, so that the treatment of an affection of the liver is in danger of becoming the specialty of the surgeon rather than of the physician."

Hepatectomy is practiced for the removal of solid tumors of various kinds. Roggi, an Italian surgeon, reported a case in which he resected an echinococcus cyst by enucleation which weighed forty one ounces six drachms and twenty-one grains, and as it was impossible to approximate the edges of the wound he resected three and fifteen one-hundredth inches of liver. The hemorrhage was controlled by cat gut sutures. A microscopical examination of the resected portion of liver showed the orifices of biliary canals in region of cysts, patulous, a condition involving much danger, if fresh liver surface is left free in peritoneal cavity.

Ceccherelli has demonstrated that in animals one third of the liver may be removed

without causing death, and says that removal of more than that amount is fatal.

Potemski, in his experiments upon dogs, has found that the peritoneum withstands a certain quantity of bile if thrown into it at one time, but is not able to resist the effects of a continuous flow.

The difficult part of hepatectomy relates primarily to control of hemorrhage and prevention of air embolism; secondarily to the prevention of sepsis and peritoneal complications.

The writer will defer the discussion of hemorrhage, embolism and sepsis to the report of case in point.

The operation is usually performed in one or two stages. Dr. Lindmann was the first to recommend the completion of operation in one stage, and Dr. Tate also advocated the method of Lindmann in one stage, in preference to Volkmann's operation in two stages; and, as your essayist believes it more like American surgery, he prefers the one stage operation; however the method first practiced and recommended by Volkmann is easier and possibly safer than the operation performed in a single stage; especially where an aseptic operation is not done in detail.

Displacement of liver may be congenital or acquired. The American Text Book of Surgery, says: "In this rare malady the liver forms an abdominal prominence which can be moved about, which is apt to transmit aortic pulsation and which changes its situation as the patient shifts attitude. This condition usually arises from a lax abdominal wall following repeated pregnancies, and ends by saying, the only treatment is the use of an abdominal belt, possibly operative measure for its fixation might be of use."

Osler quotes J. E. Graham in a recent paper as having collected seventy reported cases from literature, and says in a considerable number of these, there has been a mistaken diagnosis, and further says the liver is so connected at its posterior margin with inferior vena-cava and diaphragm that any great mobility from this point is impossible, except on the theory of mesehepar or congenital ligamentous union between these structures.

The ligaments may show as in Leubes cases an extreme grade of relaxation. Fifty-six of the seventy cases collected were in women.

The acquired displacements was demonstrated by Heister in 1754 upon the cadaver, and by Cantani in 1866 upon the living sub-

*Read before the Kentucky State Medical Association, Lexington, Ky., May, 1904.

ject. The causes enumerated in the Twentieth Century of the practice of medicine, Vol. 9, are, straining efforts, flaccidity of the abdominal wall after pregnancy, and it would appear that the causes might be found in congenital anomalies of the ligaments, consisting in either a greater length or a greater extensibility.

From this point of view it is easily understood how any influence that would cause a diminution of abdominal pressure might induce displacement of liver.

Accepting this as true, we can understand how it is that the liver became displaced in case herewith reported.

Through the courtesy of Dr. Cole, of Millersburg, I was asked to operate on March the 16th, 1899, for tumor, supposed by attending physician to be a lipoma of the abdominal muscles. Patient residing eighteen miles from my place, we set 9 a. m. Promptly at time designated, I met attending physician and elicited the following history: Augustus Akers, age 67; farmer; married; colored; weight 140 pounds; stature erect and has no hereditary tendency, and is clear of any suspicions of specific trouble; height about 6 feet; weight two years previous, over two hundred pounds. At about this time he began to emaciate and develop symptoms of gastric trouble, or that common to dyspepsia, such as loss of appetite, nausea, constipation with acute diarrhoea, and there was dyspnoea and hacking cough, for some time which finally disappeared, and then a sense of weight and oppression in region of stomach and liver was complained of, also cardiac palpitation. Pulse 120 to 130 irregular, intermitting 1 in 10 to 20 beats, temperature ranging from normal to 102 with occasional rigor, night sweats following, skin dry, harsh and slightly jaundiced, oedema of feet and ankles was slight as a result of anaemia. Patient was able to go out and direct his work on farm, but on returning to house would feel tired and exhausted, and after lying down for a while was able to go out again and see about his affairs.

This state continued till about three months previous to my being called; when a tumor appeared in left umbilical region which rapidly increased in size, and was diagnosed as lipoma of abdominal muscles.

Examination revealed the following: Pulse 144; temperature 101; respiration 26; skin, hot, dry and slightly jaundiced; tongue coated white, muscles flaccid and showing extreme emaciation; anaemia marked; feet and ankles slightly oedematous; kidneys a little irregular, but showed no organic changes.

Patient stripped and standing; inspection revealed a tumor in the left umbilical region, the lower margin being below umbilicus, and looked to be about the size of the hands placed

together with a lemon between the palms; by palpation the mass reveals nothing save that the tumor feeling very similar to a retained placenta with considerable blood clot after parturition.

On completing the examination and consultation, we decided that he had beyond a doubt an intra peritoneal tumor to deal with, which we thought might come from spleen, pancreas, stomach or liver, thinking the symptoms pointed to the latter; we decided to make an exploratory operation, and deal as we thought best with pathological conditions found.

Having no help other than two colored men and women, we telephoned Dr. Duncan, of White Mills, some seven or eight miles distant. In the meantime we set to work, supplementing the already preparation for a minor operation for that of a capital one.

After the strictest precautions in the minutest details of preparing patient, room, instruments, and dressing, under the direct supervision and energies of Dr. Cole, and myself, we were ready to operate by twelve-thirty P. M.

Dr. Duncan administered the chloroform. Field being surgically cleansed and shaven, by pressure we were able to slide tumor to the right, the center of which was near median line. I made an incision about three and a half inches down on tumor, found it adherent to parietal peritoneum, after freeing adhesions found that we were able to replace organ, and that our suspicion of tumor of liver was correct; we extended the incision to about six and one half inches, slightly curving to the right and ending at costal margin. Deciding to proceed we thought best to complete the operation at once as patient was bearing anaesthetic well. Having arrested all hemorrhage, we introduced large aseptic pad to hold intestines out of the way.

The systic part of tumor bulging into the incision, after delivering as much of tumor as we thought safe by traction on applied vulsellum we completely packed around the base, gauze, and opened the cyst, evacuating about twenty-four ounces of milky fluid.

It was now plain that we had a cystic tumor of longitudinal fissure involving the margins of both right and left lobes. By traction on vulsellum we were able to lift the margins of liver well into and out of wound. To control hemorrhage and prevent air embolism we began at lower and outer margin of right lobe, placing silk sutures about one and a half inches from the margin of lobe, bringing it out about three-fourths of an inch on same line and same distance from edge of liver substance, interlocking the next suture with this one and freeing the walls of cyst, which seemed to be a fibrous mass about three-fourths

of an inch around the margins of both lobes.

By excising same, one-fourth of an inch from suture following closely the scissors, with sponge pressure, as a double precaution against hemorrhage and air embolism. This procedure was continued around the margins of both lobes, which completely freed tumor from liver substance proper. The solid part of tumor lay enveloped in a fibrous sack and was attached to the broad ligament. This was ligated and cut away. After evacuating cyst of its milky contents, there remained about two or three ounces of colloidal matter, which separated the fluid from the solid portion, which was estimated to weigh twenty-six or twenty-eight ounces, making a total of fifty to fifty-five ounces.

And microscopically appeared to be a cystofibromata. I did not have a microscopical examination made as I came away forgetting the tumor, which I had wrapped to bring home for the purpose of weighing and having examined microscopically.

As to hepatoxemy, Billroth was the first to do this operation in course of a laparotomy for supposed abdominal tumor. Marchand in 1891, performed a true hepatoxemy for displaced liver. In my case after wound had been cleansed, and Iodoform gauze drainage introduced, we sutured both lobes to the walls of abdominal incision, applied the usual dressings held in place by binder. Time in operation 85 minutes. Pulse and temperature gradually receded to normal. Drainage removed in seventy-two hours. Sutures removed the seventh day. Wound healed by first intention, save a pin hole sinus caused by a suture, after the removal of which it promptly healed by granulation.

Our patient being able to go about the house in twenty-one days, and from this time, he made an uneventful recovery, weighing about one hundred and eighty-five pounds, and doing ordinary farm work.

Dying suddenly over two years after operation of haematemeses.

I wish to acknowledge the efficient assistance of Dr. Cole.

* * * * *

DISCUSSION.

Dr. J. G. Carpenter, Stanford: I arise to compliment the essayist for his successful work. He did not do this in a hospital, and did not have a corps of trained nurses to assist him, but he had good country asepsis, and plenty of ozone in the atmosphere.

The first successful surgery was done in the country, so, I think, it is not a question of whether the operation is to be done in a hospital, but whether the man is competent to cope with the situation. We find in this case, from the doc-

tor's work, that he was abundantly able to handle the work.

I am glad to say that country surgery is on the increase; the country doctor has a right to be glad.

* * * * *

Dr. A. T. McCormack, Bowling Green: This is really one of the most valuable contributions of this session. These operations can almost be counted upon the fingers of your two hands.

This successful case points to a way of escape for such cases. It should not be allowed to pass without more attention being paid to it than merely hearing the paper. Together with Dr. Quinn's report of case of "Gunshot Wound of the Liver," we learn that a great deal may be done in cases of injuries of the liver, or of tumors of that organ.

PREGNANCY AND PARTURITION IN UTERUS, WITH INOPERABLE CANCER OF CERVIX.*

By J. A. SHIRLEY, WINCHESTER, KY.

Mrs. F., aged 38, mother of six children, four of whom were drowned together, noticed within a few months after the above sad event herself flowing too freely and often and accompanied with more pain than she usually suffered at her regular monthly periods. The usual domestic remedies proving unavailing, she came to me for advice.

Upon examination, the bright red, extensive and burrowed ulceration of external os together with the above history, unhesitatingly led to the diagnosis of cancer. With as little delay as possible I sent her to Dr. Charles A. L. Reed, of Cincinnati, whose ability as an all around gynecologist we have never heard questioned. He concurred in the diagnosis of malignancy and suggested immediate vaginal hysterectomy; at the same time venturing the opinion that it was an ideal case for such operation. Upon attempting the procedure, however, some days later, he found such involvement of surrounding structures as to render total extirpation impossible. He contented himself with removal of a portion of the anterior lip of cervix and after a few days stay in hospital, sent her home to speedily succumb to the ravages of the disease; this she refused to do and instead, quite soon became pregnant; the removal in all probability of the diseased obstructive mass by the doctor making entrance of the fecundating product possible.

On discovering this fact I at once informed my medical friend, who immediately replied that it was impossible. I kept quiet for some

* Read before the Kentucky State Medical Association, Lexington, Ky., May, 1904.

weeks until assured of the correctness of the diagnosis, when I told him that I had never known a foetus in utero kick more vigorously.

Being convinced of the actual state of affairs he very properly advised me to send her to the hospital when approaching maternity as it would, he thought, be impossible for her to be delivered by the natural channel; in fact, considering a Cesarean or a Porro imperative. To the hospital she refused to go the second time preferring to die, as she felt she must, at home surrounded by relatives and friends to dying among strangers.

So matters just drifted along while the period of expected confinement approached nearer and nearer. When her time was nearly up it was decided that when her physician, Dr. T. S. Allen, of Bloomingdale, Kentucky, found her in actual labor that I should be summoned.

Accompanied by Drs. I. H. McKinley and the lamented N. V. Prewitt, we repaired to the home of the patient ten miles away with much fear and trembling, as Dr. Allen had expressed the opinion some weeks before that on account of a cartilaginous ring as large as his index finger at external os, delivery by way of the vagina could not be accomplished.

We found on arrival the posterior half of uterine cervix dilated and apparently free from the growth which seemed attached to anterior half of os and extending well forward. It was thought that the diseased mass could be incised sufficiently to admit of the introduction of the forceps. After surgical anesthesia and introducing catheter into bladder it was discovered that to cut entirely through the excrescence would endanger if not actually penetrate the bladder walls.

Hence this method of attack was abandoned. The hand introduced into the vagina, and finger after finger into os, dilation enough to admit and lock Elliot's long forceps and delivery was accomplished. Quite a furious hemorrhage followed although the uterus was now well contracted. The flow was found to be coming from the offending growth which had torn in numerous directions much after the order of old leather. Packing uterus and vagina firmly with iodoform gauze the bleeding checked. Dr. Allen looked after her during the puerperium and she got up in about the usual time. She lived about eighteen months, afterwards dying of an extension of the disease. The child, a vigorous female is living to this good day, eight or nine years old.

Having read somewhere recently that sudden grief or fright, especially the latter, was a cause of cancer, the query with me is was it true of my patient? Surely an abundance of grief was present as we can readily imagine

by the sudden taking away of four children at the selfsame moment.

CONSERVATIVE PELVIC SURGERY, WITH A REPORT OF THREE CASES.*

By A. H. BARKLEY, M. D., LEXINGTON, KY.

I desire to beg your indulgence for a while and invite your careful consideration of a subject that has been written upon many, many times before; however, a rehashing of a few facts well known to us all and the report of three cases may serve as a stimulus to bring out a general discussion and thereby glean a few things that may be of service to us in the future. This paper is simply intended to impress upon the minds of those who do Radical work, if there be any in this audience, the importance of saving every piece of Ovarian tissue, tubes and uterus that is consistent with good work. I do not wish to be classed as an extremist but simply appeal to the cool judgment and good common sense of each and every one of you who does Pelvic Surgery.

I desire to say at the outset that the time allotted to me on this program for the reading of this paper will not permit me to enter into a discussion of the Etiology, Pathology and the technique of the various operations upon the uterine appendages. I will leave this subject for those gentlemen who are to discuss this paper that they will bring out clearly those points which I fail to make plain to some of you.

This subject has been written upon alike by surgeons and general practitioners and no subject should occupy a place of more prominence now before medical bodies. When we stop to consider the terrible onslaught made on the pelvic organs by the "would-be-surgeon" we can readily see that it is not only of importance to the surgeon and general practitioner, as I have said, but is of vital interest to the patient.

Women are often subjected to an operation which is unnecessary, hence in the majority of such instances, the loss of an organ or organs, which if properly treated could be saved and would perform their normal functions, make matters much worse by changing the local trouble to a general disturbance, especially of the nervous system such as usually follow the "Surgical Menopause."

To the Gynecologist much credit is due, for through his untiring efforts a complete change has been wrought in the treatment of certain pelvic disorders, which only a few years ago were promptly removed by the knife.

Conservatism now has a very different mean-

* Read before Fayette County Medical Society.

ing from what it had ten or fifteen years ago, as then it was understood that a surgeon to be considered conservative must of a necessity be radical. The man who does radical work now on all cases of pelvic surgery, that is one who removes organs that could be saved, is not only unskillful but should be subjected to the severest criticism.

In the course of this paper I do not wish it understood that radical work is considered bad surgery, not so, as it may happen in the course of an operation that the most conservative treatment of the case in question would mean radical extirpation of the uterus and its appendages, for instance, in malignant diseases.

There are many reasons why we should be conservative in dealing with the pelvic organs. In the first place I think it is the desire of every conscientious surgeon to do good work, work that will be of the greatest benefit to our patient, for the conserved structures are of the utmost importance to the comfort and future welfare of the individual as the pelvic organs are so closely interwoven with woman's nature that they serve to distinguish her from the male sex.

It has been charged that menstruation is a useless phenomenon occurring once a month, but when we stop to consider the disagreeable symptoms which follow its cessation, it matters not whether it be induced by the knife or by nature, one can readily understand how very important the pelvic organs are to the human economy and eternal happiness of the female.

Another reason why we should be conservative is the supposed secretory functions of the Ovary. Much has been written of late on the "Internal Secretions" of the "ductless glands" and the ovaries are said to be analogous in that they are supposed to secrete some sort of a fluid which is consumed in the body. Repeated experiments of late have shown that there is a very strong probability that the ovaries do secrete a fluid of some kind and I believe the profession is unanimous in the opinion that whatever this fluid may be, it certainly is used up in the body somewhere and for some specific purpose. While the argument in favor of the secretory function of the ovaries has not yet been put upon undisputed ground, I think circumstantial evidence is in favor of such function so strong as to constitute a valid reason for conservative work.

As I said in the beginning, through the untiring efforts of the painstaking and careful Gynecologist he has learned from clinical experience and the large amount of data at his command together with the assistance of a competent pathologist to distinguish diseases which require radical treatment from those

that do not, hence he has become more conservative, as, for instance, in the case of Cystic or Cirrhotic ovaries. Cystic ovaries, as "Kelley" has said, and very properly so, "no longer afford sufficient reason for their removal unless in rare cases where the ovary is so greatly hypertrophied as to convert it into an aggregation of Cysts with the albuginea greatly thickened. A few Cysts with clear walls often considered in the past as sufficient reason for removal are now considered normal or nearly so as to never justify their extirpation." He also further states that Cirrhotic ovaries do not exist as a pathological entity but are simply hard, contracted bodies which have had their nutrition interfered with for a longer or shorter time due in the majority of cases to malposition or adhesion.

I have in the past removed ovaries that I thought at the time were Cirrhotic for they were hard and contracted and very much bound down by adhesion, but of late years I have made it an invariable rule not to remove Cystic or Cirrhotic ovaries unless there was present an actual disease of the organ and I feel that I have been amply repaid by following such a rule as I have obtained better results by puncturing the Cysts or breaking up the adhesion which bound down the Cirrhotic ovary and have left my patient an organ which will prove useful to her in the future and contribute to her body that function which nature intended it should.

This brings us up to that part of our subject which is exceedingly interesting to the Gynecologist and what is most gratifying to know that is, that the ovary may be handled as any other organ in that it does not cease to perform its function when a growth has been removed from it or when for any reason it is though best to reset a part of it.

Some authorities advocate opening small abscesses, cutting their lining membrane, and sewing them up. While I would hesitate if there were a great number of them, still I do not see why an abscess of the ovary if properly treated should not heal as readily as an abscess anywhere else.

Very little has been said so far as to the work on the tubes and uterus but they come in for their share of conservative work as well as the ovaries. The work which has been done upon the uterus of late has clearly demonstrated the fact that conservatism may be employed upon the uterus as well as upon the ovaries and tubes. It is a very common thing to find in our medical journals histories of cases operated upon where large tumors have been removed from the uterus without removing the organ itself. Conservatism has been carried one step further by an ingenuous operation, the removal of the cornu of the uterus and

the implanting of a piece of ovarian tissue. But suffice it to say that enough work has been done along this line to conclusively prove that a much larger field of usefulness is open to the man who would employ conservative work on the uterine appendages.

The tubes respond very readily to conservative treatment and are not removed "en mass" now on any and all occasions as was formerly practiced and are only removed for definite reasons, and these are diseases of the tubes which have so changed and altered their normal condition as to render them hopelessly useful and serve as a menace to the general health of their unfortunate possessor.

I shall not attempt to mention all the operations on the tubes in which conservatism is employed as a few will suffice to show how much can be done to a tube and still it will perform its functions. The commonest ones are as follows: Releasing adherent tubes, opening closed tubes, removal of a portion of a diseased tube, etc.

As far as an adherent tube is concerned, much discomfort can be avoided by simply breaking up the adhesions with the fingers if they are soft and not too extensive, but when dense bands exist they should, of course, be divided with a knife or scissors. In this way a tube which has been bound down, kinked, and somewhat thickened may once more approach the normal tube and perform its functions properly.

Excision of a portion of a tube may be performed as is quite frequently done nowadays and many a tube is saved which only a few years ago was removed "en mass."

I noticed in looking over some records of cases I have operated upon that three in which conservative methods were employed have become pregnant and borne living children. I desire to report these cases as they will help substantiate what I have said.

CASE I. Mrs. T—, white, age twenty-seven, was seen by me on August 10th, 1899. She had been married twenty-eight months, had had no children or miscarriages, physical examination revealed both ovaries tender, the right more so and enlarged, both were bound down, the uterus was enlarged, somewhat drawn toward the right side. She gave a history of painful and irregular menstruation and repeated attacks of pelvic congestion, which I supposed amounted to an inflammation with some exudation. The uterus was curetted and the abdomen was opened and the ovaries were found bound down, so were the tubes and the uterus. The right ovary was removed because of a large abscess in its center, the left ovary, tube and uterus were released from their ties, the appendix removed, and the abdomen closed. In less than two

years after the operation she became pregnant and was delivered of a nine pound girl much to the delight of the parents.

CASE II. This was a woman who married rather late in life; her general health was good and she only suffered at her periods. An examination showed she had a profuse Leucorrhoea, was tender on the right side and some little enlargement could be made out by using considerable pressure. The diagnosis of a cyst together with cystic ovaries was made, which was verified by operation. The uterus was curetted, cyst removed, and cystic ovaries punctured. She made a nice recovery and was later delivered of a child.

CASE III. This was a woman that had been an invalid more or less since her marriage. She had two attacks of pelvic peritonitis which bound down all the pelvic organs. I opened the abdomen, broke up all adhesions, opened the left tube whose fimbriated extremity was closed, and also removed the right tube and ovary for Pyosalpinx. The recovery was complete and the patient was delivered last spring of a living child.

From the above cases one cannot draw many conclusions worthy of note on account of the small number of cases reported, but for one reason if for no other, we should try to preserve all the pelvic organs possible during an operation for the possibility of future pregnancy.

From what has been said one might be led to believe that conservatism is employed only on the pelvic organs. This is not the case as I know of no other place in the body where conservatism is practiced less and the reckless and indiscriminate extirpation of organs that are so useful to the patient, as in the pelvis. I do not wish to be understood from the foregoing that total hysterectomy is to be condemned. Not at all. I only wish to call your attention to the fact that the indiscriminate removal of the female generative organs should be condemned, that we should not continue in the same old way or removing everything that does not look just right without positive proof that actual disease does exist in the organs in question.

* * * * *

DISCUSSION.

Dr. J. G. Carpenter, Stanford: I am heartily in favor of conservative surgery as well as radical surgery. As I understand it, conservative surgery is surgery by a man who understands his business.

That the tubes and ovaries have been saved, there can be no doubt. I think Dr. Barkley is to be congratulated.

There was a time when gynecologists vied with

each other to see who could remove the most tubes and ovaries.

There is a conservative side and a radical side.

It is very important to every woman who wishes to become a mother that the ovaries and tubes be saved, and there are many moral reasons why we should save the ovary.

If it were merely a question of good or bad gynecology, I would prefer to remove a tube, than to undertake the conservative surgery and save it.

I do not think that a cyrrhotic ovary by itself is a sufficient indication for its removal.

The great test, I think, is the possibility of the future usefulness of an organ.

It is quite the thing now to be either a radical surgeon, or a conservative, but I think that every case calls for the exercise of good common sense as to which procedure is preferable and more suited to that particular case.

* * * * *

Dr. J. N. McCormack, Bowling Green: I move that Dr. Arthur Johnson, of Cincinnati, be made a guest of the session, and be invited to the platform. Motion carried.

* * * * *

Dr. Arthur Johnson, Cincinnati: That word "guest" sounds like a strange word to me among Kentucky physicians.

It seems just like it was the other day that I was here in Lexington. It hardly seems possible that these few years have made me a stranger. It seems like I am just coming home.

I am asked to speak on conservative pelvic surgery, and I will state that I believe in conservative pelvic surgery; that is to say, where a tissue is capable of being saved, save it.

It has been stated that ten per cent. of these pelvic diseases are due to tuberculosis, and when you are fighting tuberculosis, you are not fighting for an idea, for conservative or for radical surgery, but you are fighting for a life.

With our present technique, we can relieve conditions which formerly we would never have thought of attempting to do anything with. I have removed a fibroid that was half as large as a good sized water pitcher. Now, if you can remove a fibroid and leave the uterus, by all means do it, no matter how much the work; but if you are going to leave a little knot of a uterus which is capable of nothing but causing miscarriage, then a man would be a fool to leave that organ.

We have to use common sense in dealing with these cases. We must know what we are going to do, and what we are going to leave before we start in. Always leave in one ovary, where you do not suspect tuberculosis.

There is nothing that I know of that makes a patient so miserable as a cyrrhotic ovary. Menstruation is painful, and many opium fiends are made by these conditions.

One thing that will very frequently occur in

attempting to save a cyrrhotic ovary is that men will work, and work, and delve down, and when they are through, they have removed the only part of the ovary that is normal, and the part that they have left is cyrrhotic part.

Lots of men in The American Gynecological Association tell me that they have done these operations, and had to go back and repeat their work afterwards.

* * * * *

Dr. Louis Frank, Louisville: The essayist has expressed so well my own views on this subject that there is little left for me to say. I am fully in accord with what the essayist has said.

I believe in conservatism in pelvic surgery.

I believe that in operations upon the pelvic structures of women, we ought, if possible, to leave some portion of the ovarian structures behind.

This has been rendered possible on account of our more thorough methods of technique, and better method of suture material, rather than to any change in ideas as to the effects of the removal of the ovaries.

The patient should always be informed of the possibilities of the whole ovary having to be removed.

The Doctor reports three very successful cases.

The more we learn of the technique, the more we learn of the pathology, the more conservative we will be in this work.

It may be that sometimes this work will have to be radical; we may have cases where it would not do to leave these organs behind.

* * * * *

Dr. Barkley, in closing: I do not believe that the dangers and evil consequences following a secondary operation are as great as those following the removal of ovaries that are only slightly diseased, and with a possibility of future usefulness. And, while I do not desire to leave the impression that I leave every cyrrhotic ovary that I find, there are a great many cyrrhotic ovaries that can and should be saved.

FRACTURES OF THE NECK OF THE FEMUR.*

By J. L. BARKER, PEMBROKE, KY.

Mr. President and Fellow Members:

When I was appointed to write a paper on the above subject, I at once felt a thrill of pleasure and at the same time a wave of fear and misgiving. Pleasure, because it is a subject on which I have definite and firm opinions, which as some of you may discover, are those expressed by certain authorities. I admit that, but I have some time since adopted them as my own and am glad to say I do have good author-

* Read before the Todd County Medical Society, July 6, 1904.

ity behind me. These opinions, however, are strengthened by a close and careful study of a few cases of this injury which have come under my own observation.

Fear and misgiving arose because, in my opinion of the vast importance and magnitude of the subject, and of the keen sense of incompetency on my part to deal with it adequately.

There is no injury within the domains of surgery which naturally should appeal more strongly to our tender sympathies, because the victim is usually old and helpless, and because of the great amount of pain and discomfort which we know must usually ensue.

Again there is no injury which should appeal more strongly to our professional pride, because of the seriousness of the injury, life itself being often involved, always the usefulness of a limb, not to mention minor involvements. Also because of our, thus far, recognized and admitted inability to render satisfactory and successful treatment.

Admitting then that the subject is one of great importance and that our treatment is not all to be desired, still much can be done by intelligent treatment, by timely suggestions, and by constant watchfulness to render more comfortable and actually to save life and restore usefulness of limb.

It behooves us then to study most carefully in our offices, before this society and especially at the bedside, this grave injury.

Fractures of the neck of the Femur have been classified of old as intra-capsular and extra-capsular and more recently a mixed variety partly intra- and partly extra-capsular, having reference to the attachment of the capsular ligament, of hip-joint. It has been taught for a long time that in intra-capsular fracture the proximal fragment loses partially its vitality and therefore that *bony* union is impossible. Ligamentous union being the best hoped for except in cases of infraction.

Dr. Lenn, of Chicago, has, however, conducted a series of experiments on cats, where direct fixation of fragments by means of aseptic nails was employed. His results prove that *bony* union is possible and the reason for not getting it ordinarily is because of non-apposition and non-immobilization of the fragments.

But a much more practical classification and important from a clinical, diagnostic, prognostic and therapeutic standpoint is that which divides these fractures into impacted and non-impacted.

By impaction of a fracture we mean the driving of one fracture end into the other, thereby securing perfect coaptation and fixation, the very things it is most difficult and most important to secure in these fractures we are discussing. Hence the importance of recognizing this condition in making a diagnosis in giving

a prognosis and in instituting treatment as we shall see later on.

As I have said this fracture usually occurs in old people, its frequency increasing with the advance of old age. Thus between the ages of twenty-one and thirty it represents only 1-91 of all fractures; between thirty and forty, 1-74; between fifty and sixty, nearly 1-10; while over seventy it represents over 1-3 of all fractures. This is because of changes in bone structure itself, senile osteoporosis.

It is more frequent in women presumably, because of the more horizontal position of the neck. The exciting cause is usually a fall on the foot or knee, the force being transmitted in the axis of the femoral shaft, over the trochanter major, the force being applied in the axis of the femoral neck, the latter being said to be most frequent. Apparently the simplest, slightest turn or twist of the foot at times causes the fracture, then the fall. This was the case in an instance which Dr. Lackey and I saw and of which more anon.

What are the symptoms?

These are important to know, so that by securing a history of the accident, getting the patient's sensations, recognizing the impairment of function, inspection and mensuration we may make our diagnosis without subjecting our patient to a tedious, painful, and perhaps very harmful (careful?) examination.

Then we have the history of a fall, however insignificant it may be, the patient is unable to get up and walk or handle the limb in any way, it lying perfectly lifeless and helpless, unless it be an impacted fracture, when in some cases the function is not lost altogether, there being one case on record, where a man ten days after the injury ran out of his burning house, and received no treatment thereafter, with a very useful limb resulting.

There is pain in the hip, which is usually very severe, and markedly increased by motion imparted to the limb.

When we come to inspect, first and absolutely necessary, strip the patient, put him or her on an even, firm or hard matress, or on a table or floor, covered by a quilt or blanket. Put him in a symmetrical position, flat on his back.

Now we notice a fullness below the fold of the groin, caused by the anterior displacement of the fractured ends of the fragments and if the patient has fallen on trochanter major there are perhaps evidences of contusions. Suggillation appears sooner or later.

There is eversion, a rolling outward, of the limb. This is one of the most important symptoms. In non-impacted fractures perhaps the most potent force causing eversion is simply gravity, the leg naturally rolling outward, when deprived of its long connecting link to the rest of the body. Impacted fracture *may*

be inverted and when so the limb is held firmly inverted by reason of the impaction, but as a rule there is eversion even in case of impaction, because the force is applied in such a manner with regard to the anatomy of the parts as to cause greater, deeper impaction on the posterior surface of the neck.

Measurements show shortening of the injured leg which may be great or little. Measurements should be made from Anterior Superior Spinous process of Ilium to lower point of Internal Malleolus.

The legs must be brought side by side, symmetrically placed in relation to the body, or if this be impossible they *must* be placed at the same angle to the body. We have at times what is known as progressive shortening, as for instance in intra-capsular fracture, due to the capsular ligament preventing much shortening at first but finally giving way in two or three weeks when shortening increases from perhaps one-half inch to one and one-half or two inches. Again this may occur in an impacted fracture, when the impaction for some reason gives away, is broken up.

Next measure to find the relative position of the great trochanter. Nelaton's line is one drawn from Ant. Sup. Spine to the tuberosity of Ischium. Normally the trochanter is on a level with or immediately below this line. In fracture of the neck it is found to be above this line, to a considerable extent, usually.

Byants measurement is to drop a perpendicular line from Ant. Sup. Spine to the table, then measure the distance from this line to upper border of trochanter major. The distance is diminished in proportion to the shortening in fracture of the neck. Diminution in arc of circle described by trochanter on rotation of limb, abnormal mobility and crepitus, I want to warn against except in a very gentle manner, unless the diagnosis is indeed in great doubt.

(1). Because we have symptoms enough to make a diagnosis without them as a rule.

Why? Because in the effort to elicit these symptoms there is such great danger of breaking up a possibly existing impaction.

My opinion is that in the case of an old person, where there is inability to use the limb after an injury, however slight, though we can't get positive signs of fracture, still it should be treated as such. We may at times lean to the opinion that a contusion causes these symptoms because of the insignificance of the injury. But let us bear in mind that less force is required to cause a fracture which will give rise to this impairment of function than is required to cause contusion enough to give rise to such inability.

Having made a diagnosis, what shall we say as to prognosis? I believe the laity has been

trained to accept an unfavorable prognosis in these cases more readily than in any other. And we are compelled to be very cautious in making it otherwise.

In a very old and feeble individual death may occur from shock. Again Hypostatic Pneumonia may put an end to the patient's life. If not, then exhaustion, due to pain, confinement, and bedsores may cause death.

But aside from these what is the prospect as far as the restoration of function to the parts injured is concerned? Usually we may hope for a fairly useful limb, with some limp, some shortening and some impairment of function, though it is sometimes even better than this, and in my opinion the patient is usually satisfied with the result. It is always several months and maybe years before the maximum good results are reached. Impacted fractures give a better prognosis than non-impacted.

As to treatment. Here we have laid before us as broad a field for the display of our patience and perseverance, watchfulness and tenderness, judgment and ingenuity as any in surgery. And it is only by care in the observance of all these that we can secure the everlasting gratitude, nay, the love itself of the elderly people for whom we work, and the best results possible from a surgical standpoint—a rich reward indeed.

First, attend to the general condition of the patient. Shock is sometimes severe in these cases. Stimulants may be required, indeed they may be throughout the confinement.

Urge, with the most persistent, forcible language, the absolute necessity of careful, efficient nursing. Give firm, explicit detailed directions regarding it. Don't generalize. In no case of injury or disease is a competent trained nurse more needed than here and while firm she must be gentle.

Bed sores are always a menace in these cases in old people, and the greatest care possible must be exercised to prevent them. All points of pressure should be bathed twice a day with warm water and soap, dried, bathed with alcohol, dried again and dusted with zinc oxide and starch or boric acid or the like. Also change point of pressure by changing position of patient and appropriate use of pads, cushions, etc. When once formed, bed-sores are treated on general antiseptic plan, first cleansing with Hyol, or carbolic solution, then with H₂O₂ Or., again with Hyol, dried and dressed with some antiseptic stimulant application. I suggest Balsam Peru, 1 pint; Castor oil, 5-7 pints.

For the sake of convenience in future references let us divide these cases into three classes.

Class No. 1, includes those patients that are very old and feeble, or in other words, with low vitality. In these we are compelled to direct our treatment to the general condition of the

patient, allowing the fracture itself to become of decided secondary importance. To this end usually stimulants are required, the patient is put in a semi-reclining position if comfortable, the position changed often, the fractured limb is steadied by the use of sand bags and slight extension made by double inclined plane or weight and pulley if it does not cause discomfort or mental irritation.

Class No. II, includes those patients with a little more vitality, whose condition is such as not to forbid direct positive treatment of the fracture itself, but still such as to forbid such radical treatment as Class III. These are treated by the old method of treatment giving fairly good results in which the principle of treatment is to maintain extension by weight and pulley, using 5-20 lbs weight and elevating foot of bed. The limb is kept from rotating by sand bags or in cases more able to stand it, by a long external splint reaching from foot to axilla, with a cross-piece attached to lower end which prevents eversion or inversion.

I believe there is scarcely any difference of opinion in the profession, in the abstract, as to the conditions which should govern us in our treatment, nor do I believe there is much material difference of opinion as to method of treatment when classified as I have and as I am going to outline. But I believe there is a good deal of difference in the individual judgment of the members of the profession as to the vitality of the patient, as to how much the patient can stand, or in other words, as to which class the patient belongs, Class No. I. II, or III.

I believe it is the trend of latter-day teaching, at least it is my own opinion, and I want to make a most earnest plea to that effect that we shall give these patients credit for more vitality that we should lean more strongly to the radical method of treatment, especially that some of class No. II, be put in class No. III, that where we have heretofore treated patients according to class No. II, let us hereafter treat more of them after method of class No. III, as I will now speak of.

Class No. III, includes those patients who are physically able to withstand a pretty severe primary dressing. The dressing may be of Plaster of Paris or Thomas' Hip Splint. With the latter I have had no experience, but looking at it from a common-sense standpoint, I do not see hardly how one can prevent it from causing painful injurious pressure, nor how it can secure the coaptation and immobilization that we can get from a properly applied Plaster of Paris dressing. I say properly applied, I have reference to the method so well described and advocated by Lenn, of Chicago. (Read).

We should be careful to trim away the plaster carefully around the perineal region. Once

this dressing is applied our trouble is virtually at an end and I contend that the patient suffers less pain than by any other method, and there is less tendency to formation of bed sores.

How long shall the dressing remain, whatever form of dressing we employ?

On an average about three months, since it takes about that time for bony union to occur and weight should not be borne on the limb for four months.

We may expect the patient to be walking with a cane in six months, and with no assistance in about twelve months.

I cannot bid farewell to the subject without once more referring to impacted fractures. Of course these should be immobilized. I think with Plaster of Paris, after the method described by Lenn or instead of putting the patient in a standing position on a block, put him on a pelvic rest for application of Plaster.

But the main point about impacted fractures I want to emphasize, is to exercise all care possible not to dislodge the fragments while applying dressing.

MERCURIAL POISONING, WITH REPORT OF CASE, WITH RESULTS OF OPERATION FOR CORRECTION OF DEFORMITY CAUSED BY POISONING.*

By JOHN E. KINCHELOE, M. D., HARDINSBURG, KY.

Those who are by virtue of their work most endangered to mercurial poisoning, are those who are engaged in various manufacturing trades, such as makers of mirrors, barometers and thermometers; and it is sometimes found in hat-makers, bird-stuffers and furriers, who use mercury in the preparation of the skins. There are numerous cases recorded where it has produced poisoning by absorption through the skin. It may also enter through the digestive tract in consequence of the contamination of the food from the uncleanness of those engaged in handling it. While the authorities say it is rare to meet with chronic poisoning from the medicinal use of mercury, in ordinary doses, when given either internally or applied to the skin, or used in the form or solution for the washing of wounds or cavities, I believe I had a case caused by the internal administration of colomel. I do not believe that we have as many cases of mercurial poisoning from the internal administration of the drug as we formerly did, simply from the fact that its effects are better understood, and that we pay more attention to the

* Read before Breckinridge County Medical Society.

functions of the organs of excretion during its administration than we did formerly.

Some people have an idiosyncrasy for mercury and are more susceptible to its toxic effect than others, especially are women and children very susceptible to its effects. In whatever form and by whatever channel it is introduced into the blood and tissue, it exists there in the form of an albuminate and is very slow to be eliminated, hence the importance of keeping the excretory organs in an eliminating condition during the administration of mercury. Ludwig found it in cases of chronic syphilis, which had been treated by mercury, many years after the use of the drug had been discontinued. The action of mercurial compounds, especially the therapeutic action, varies very much in intensity and in kind; this variation depending largely upon the condition, on the one side, of the preparation, and on the other of the organism, affecting its absorption. Besides being more irritant the more easily soluble compounds are also more readily absorbed; but those which are soluble with the greatest difficulty, like metallic mercury, can also be absorbed and are by no means absolutely inert as regards their irritant action.

All mercurial salts, even metallic mercury itself, are, when in a state of sufficient subdivision, converted more or less readily from contact with the alkaline chlorides, especially when albuminous compounds are also present, into corrosive sublimate, which is easily soluble and is a powerful escharotic. This change is apparently hastened by the presence of free, hydrochloric acid. As the general action of insoluble preparations of mercury depends entirely upon this change, so also do many of the local effects; as for example the irritating and purgative action of calomel is solely dependent upon this conversion into corrosive sublimate. In this way, very unusual effects of calomel become intelligible. Thus we have reports of cases in which most violent and fatal stomatitis has been produced by very small doses of calomel, for example very severe stomatitis, lasting for weeks with necrosis of the jaw was produced in a boy, eight years of age, after taking once a day for three days, a dose of three-fifths of a grain of calomel.

In another case a boy fourteen years old died from mercurial poisoning, (necrosis of the lower jaw), produced by one dose of five and one-half grains of calomel. Many cases are reported in which fatal stomatitis had been caused by from six to fifteen grains of calomel taken during twenty-four hours, or in a single dose. We must assume that in these cases the change of the calomel into corrosive sublimate, which usually takes place only to a slight extent, is very much greater, perhaps, owing to

the presence of an unusually large amount of hydrochloric acid.

Different individuals show a varying susceptibility to mercury. An instructive case is reported by Kusmaul of a girl who was affected with mercurial stomatitis, caused by simply rooming with her sister, who was employed in manufacturing mirrors, and who remained entirely unaffected herself. Usually the symptoms of poisoning by mercury come on while the individual is still exposed to its action; but it sometimes happens that they are entirely absent during this period and do not appear until after removal from its influence. Several cases are reported in which the symptoms which first appeared in the disease were repeated later, and also returned again after the lapse of years without an re-exposure of the individual to the action of the poison.

Formerly, more than at present, the severest diseases, especially ulcerated diseases of the skin, and affections of the bone, have been ascribed to mercurial poisoning and especially abscesses following hypodermatical injections of corrosive sublimate. I sometimes think we are too prone to jump at conclusions. Things that we do not really recognize, we usually attribute to mercurial poisoning or some specific trouble. Often the abscesses following hypodermatical injection of corrosive sublimate are due to an infection from the syringe itself, just the same as any other hypodermatical injection.

The symptoms of chronic mercurial poisoning, as given by Lloyd, are stomatitis, salivation, ulceration of the gums, necrosis of the bones of the jaw, falling of the teeth, fetor of the breath, emaciation, anaemia, digestive disorders, affections of the kidneys, a characteristic tremor and paralysis. The chronic form follows upon repeated acute attacks, or more frequently it is due to a slow, gradual action of the poison. This is the form most usually seen in all workmen. Many of the Spanish miners are toothless by the time they are thirty five years of age, as recorded by Roussell. They believe that when a miner loses all of his teeth he is thenceforth exempt from all sufferings so far as his mouth is concerned.

In severe acute poisoning by mercury the kidneys are violently inflamed; but in the chronic form it has been the experience of those who have had experience that they do not as often find a kidney lesion. Kusmaul in his discussion of the effects of chronic mercurial intoxication in the off-spring says there can be no doubt of the hereditary influence, children born of women thus poisoned are often feeble and rickety, and seem to be prone to tuberculosis. Some of the facts handed down are the following:

Children born of parents before they had

ever worked in mercury were healthy; children born of the same parents, who had become workers in mercury, were diseased. As to the treatment of these cases the first thing to do if possible, is to remove the cause, and then to use such medicinal remedies, as will increase elimination. Chlorate of potash and iodide of potassium seem to head the list of medicinal treatment. I have very briefly given the etiology, symptoms, and treatment of chronic mercurial poisoning.

It was not as much my intention in the beginning to discuss mercurial poisoning as it was to report a case of poisoning by calomel and the results of an operation for the correction of the deformity caused by the poisoning. The case that I have to report is a little girl five years of age, who was given calomel in the forming stages of what terminated in typhoid fever. Through the kindness of Dr. E. P. Rodgers, of Askins, Ky., who sent me the case, I received my information of the acute symptoms. I saw the little patient about eight months after her recovery from the typhoid fever. She had ankylosis of the jaw, with necrosis of the inferior maxillary bone. A portion of the left cheek about the size of a silver dollar, had sloughed entirely away, exposing the teeth and the inferior maxillary bone. The sloughing of the cheek resembled very much that of the sloughing of the parotid or submaxillary glands following typhoid fever; but the location and previous history proved very conclusively to my mind that it was due to mercury. I removed at least two-thirds of the left half of the inferior maxillary bone; and with eight separate operations, under profound anaesthesia, succeeded in closing the cheek. I will state that while I have not done as much surgery as many of you it was the most tedious piece of work I ever did. On examination of the wound when union should have taken place I invariably found a bubble of saliva presenting itself. I used collodion and gauze dressings and adhesive strips. As long as I used these dressings it seemed as if it were impossible to get complete union. These dressings with the moisture they received from the body make a real poultice which keep the edges of the wound so moist and soft that the dressings act as an absorbing agent and keep the saliva constantly between the edges of the wound. I finally resorted to the adhesive strips, without any other dressing at all, and believe that the successful results were due largely to them. The little girl now has a complete cheek also lateral and vertical motion of the jaw. In plastic work done on the face I use adhesive strips altogether, and can see that my results are better. It is my experience that the least you put on these wounds the better your results will be.

THE UNITARY (SINGLE) BASIS OF LIFE.—A TYPICAL GAS.

By JACOB GLAHN, OWENSBORO, KY.

Trousseau, writing of the radical forces, cites Barthez: "The forces acting in the organs originate in the radical forces, which are distributed to each organ in accordance with unknown primordial causes, or with causes extrinsic to the living body, which act in a manner only known to us by observation."

The ganglionic system, in order to perform its important functions, needs energetic, persistent, active, constant and profound energy, and especially perfect harmony of action. This system governs the phenomena of animalism.

Virchow, in his Huxley lecture, delivered October 3, 1898, before the students and alumnates of the Charing Cross Medical School, London, England, says:

"The greatest difficulty in biology has arisen in this way, that mankind, following a natural tendency, has set the search after the unitary basis of life in the foreground of its consideration. As a matter of fact, what is more natural than the conclusion that life as a special phenomenon must also have a special basis and that the material process of life must be derived from a common cause.

"During the last century an attempt was made to satisfy this claim by the assumption with ever-increasing conviction of a special force—vital force.

"Nowadays we can still perceive the logical errors which this assumption rendered possible.

"Time has, however, passed judgment upon it, and to-day no one continues to speak of vital force. *And yet the necessity for a single basis of all vital manifestations remains.*

"How is this to be satisfied?

"This is a question which is not alone of great theoretical interest, but which has become an indispensable foundation for practical work and *particularly for medical practice.*

"But in order to reach this foundation it is first of all necessary to dispense with all dogmas of the school and to seek to construct an objective picture of the nature of vital processes.

"The organism is not an individual, but social, mechanism.

"An exact anatomical analysis of this mechanism always brings us at last to cells; they are the *ultimate* constituents of all tissues, as they were their *origins.*"

To analyze these foregoing statements, uttered by the greatest thinkers of their time, we must accept that the physical organization is adjusted to normal, through the great sympathetic or also called organic nervous system and its ganglions, *little lumps of gray matter*, scat-

tered through the body, controlling life processes automatically; or should I say *intuitively*?

Physical life is a chemical action of resolution, describing a physiological circle, due to the *molecule*, whose known properties are: dynamic or explosive action, electricity, magnetism, heat, light, motion, etc.

The molecule must be considered a unit (a whole), in fact the *basis* or *cardinal unit*.

Death is a chemical action of dissolution, due to a break in the physiological circle: a complete interruption in the adjustment and harmony of action, in the great ganglionic or sympathetic nervous system.

These are physical and philosophical truths. It is a law.

Virchow says: "Cells are the ultimate constituents of all the tissues, as they were their origins."

Virchow takes the cell as his unit and from his standpoint he is right; but when we consider the second part of his utterances, "as they were their origins;" (the cells) we must discuss this proposition.

Is an organized cell a unit, reduced to its least point of reducibility?

Is it not a fact, that a cell can be reduced further, is it not true that a cell is a chemical compound, composed of basic salts, etc., which again are composed of different volatile, ethereal or gaseous substances, molecules?—a typical gas.

Now is it not true that all substances inorganic as well as organic, are composed of these ethereal or gaseous substances, molecules? Always retaining their originally described properties, which are never lost. Therefore we have always a chemical change taking place; no matter how fast or slow—this depends entirely upon the composition, density and kind of substances or structures.

For further enlightenment upon molecular evolutions I will call your attention to Herbert Spencer's "First Principles."

Atoms, *not being units* and their *existence* only being conceivable through the *properties* of the *molecule*, will not be considered in this disquisition.

Molecules, always, gas resolve themselves according to physical law, into liquid, semi-liquid, solid and crystalized forms, and eventually into living cells.

This is a kind of alchemy, which will establish as distinct a stride in vital chemistry, as alchemy of old was the stepping stone for modern laboratory chemistry.

Vital chemistry must be observed on the living body and at the bedside.

That Virchow had only his cells in view and none of the other partially disorgan-

ized substances, is apparent. He could not have failed to observe, in following a square meal in its course of digestion and assimilation, through the alimentary canal, the chemical changes taking place, where as a milky fluid it was absorbed by the lymphatic absorbents of the intestines and emptied eventually, by means of the great thoracic lymphatic duct into the subclavian veins; and further make note of the *transmutation*, from a nondescript fluid into living blood.

This is a continuous chemical change, a chemical action of resolution, into something higher in the scale of life processes.

A cell or number of cells are composed of chemical substances, which again are made up of molecules, whose properties have already been described.

This cell or cells live in an organized community, and they have to do something, they have to work, according to the organ, they are attached to, this is then their respective function, their physiology. The composition and arrangement of cells must not be confounded with their functions.

The law of supply and demand is universal; therefore anything that works must live.

Now if the cells of Virchow are *living cells*, they perform their physiological functions, therefore by this exertion, this burning up process, must lose something, energy, a used up gas.

Since then cells are of a chemical composition made up of molecules, they have to be re-supplied by a substance of like nature, otherwise the cells would die.

The arterial blood, red corpuscles, white corpuscles, liquor sanguinis, besides the already known functions, also manufacture and carry this gaseous substance, vital force, a typical gas, with all the properties highly compounded molecules are capable to possess; creating an atmospheric condition within the organism, similar to our own outside atmosphere. (Van Helmont.)

This so-called animal heat is a misnomer. (Todd.)

The physical organization is from a physical standpoint, a self-repairing machine.

The skin carries off about five-sixths of all the eliminations of the body, which are primarily of a gaseous nature; all the other physiological actions of the body of an eliminative character, are only to maintain this liquid circulating organ, the blood—*normal*.

All phenomena must express themselves through physical substances, the molecules. Vital force is a typical gas, due to the molecule, *permeating all substances*. All substances give off some energy, a gas, caused by its inherent chemical action; and take on something from

its surrounding medium to sustain themselves—their life.

This is the chemical action of resolution. It is a law, and pertains to *organic* as well as *inorganic* life. This is the unitary (single) basis of life.

PROGRESS IN GENERAL MEDICINE UNDER CHARGE OF J. A. ALEXANDER, M. D.

The writer is a general practitioner, not a surgeon. Among the reasons for reviewing Dr. John B. Murphy's article on "*Two Thousand Operations for Appendicitis*," in the August, 1904, number of the American Journal of the Med. Sciences, the most potent one with him is the fact, that the general practitioner is the man who sees the case first, and upon whose knowledge of the diagnosis and the proper treatment of this disease, depends the life or future usefulness of the patient.

That appendicitis is a "surgical disease" as Dr. Osler calls it, will be denied by only the "nine-lived procrastinator" as Dr. Murphy politely terms the individual, who circulates the marvelous tales of his cures of thousands of cases of appendicitis without operation. That this phrase means operative measures in every case was no more contemplated by Dr. Osler than by the distinguished reporter, or by any other conscientious, competent surgeon. But I insist that it is the duty of the internist, who is not a surgeon, to give the surgeon the chance to decide the question of operation. Allowing that 80 per cent. of the so-called catarrhal cases recover without operation, I still think the whole 100 per cent. of the cases would do immensely better if the surgeon saw the whole number from the beginning, rather than calling him when abscess formation, adhesions, rupture or peritonitis demand his attention. It is as unfair to the whole of medicine as to the surgeon to ask the latter to operate on a cadaver; for the great element in the whole miserable aspect of this disease is the time which is lost before the surgeon sees the case.

Dr. Murphy presents under the symptomatology of the disease the following order in which these develop: "First, pain in the abdomen, sudden and severe, followed by, second, nausea or vomiting even within a few hours, most commonly between three and four hours after the onset of pain; third, general abdominal sensitiveness, most marked in the right side, or more particularly over the appendix; fourth, elevation of temperature, beginning two to twenty-four hours after the onset of pain. In severe cases the temperature reaches 102 or 103 degrees between eight and twelve hours after the initial pain. The

symptoms occur almost without exception in the above order and *when that order varies I always question the diagnosis.*"

Dr. Murphy's explanations of the pathology underlying the symptomatology are lucid and interesting and are based on a correct apprehension of the *role* of the particular bacteria causing the infection. With reference to the cessation of pain in many of these cases he says that "whether it was due to gangrene, intestinal escape or perforation come the diminution or cessation of absorption, *but not* necessarily a *diminution* or cessation of danger as is so commonly though erroneously interpreted and often with fatal results.

"The secondary pain, after the first thirty-six hours is usually not colicky in character, but of the typical inflammatory type and due to periappendiceal involvements. Severe pain after the primary subsidence is always a signal of great danger as it announces the beginning of peritonitis from perforation."

Dr. Murphy does not attach much importance to a leucocyte count or the pulse, but attaches much importance to the temperature curve and derives valuable suggestions, more for the surgeon's benefit, from the fluctuations of the thermometer. The burden of this enormous experience is in favor of prompt diagnosis and operation, and in closing his article on the obligations of the general practitioner he states "there is no plan of treatment which controls the pathological processes. There is no plan of medical treatment which materially lessens the risk. There is no system of beating the mortality percentages in appendicitis." The article cannot be done full justice in review and is well worthy of study—every word of it.

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That the *islands of Langerhans*, in the pancreas, bear a most important relation to carbohydrate metabolism has been demonstrated by the works of Opie, Herter, Pearce and others. Ohlmacher in the August, 1904, number of the American Journal of the Med. Sciences, contributes an interesting article on the "Relation of the Islands of Langerhans to Diseases of the Liver," and Pearce in the September number of the same periodical on "Cancer of the Pancreas and Glycosuria." Both observers note a true hypertrophy of these Islands in a certain proportion of their cases and Pearce states that this compensatory hypertrophy goes far to prove that they have an independent and special function. Ohlmacher's conclusions are as follows:

(1). Diseases of the liver are generally accompanied by an enlargement of the islands of

Langerhans, which is considered a true compensatory hypertrophy.

(2). The fact that the liver and the islands of Langerhans have been shown to possess properties which aid in governing the carbohydrate metabolism suggests that it is the limitation of this function in the liver which is being compensated by the enlargement of the islands of Langerhans.

(3). Two theories, at least, concerning the *modus operandi* of this phenomenon are worthy of consideration. One based on Lepine's theory assumes the elaboration of the glycolytic ferment in the islands of Langerhans which, entering the blood, causes the oxidation of any sugar in excess of the normal amount, and that with an increase of the sugar in the blood resulting from hepatic disease an additional responsibility is placed on the islands of Langerhans in the elaboration of this ferment in order that a natural sugar balance may be established. These structures, if healthy, in response to the additional demands placed upon them, undergo hypertrophy.

Another theory suggested by Hertern and Wakeman's experiments with adrenalin chloride and similar substances is that the secretion of the islands of Langerhans possesses an inhibitory influence upon the liver cells in their property of converting glycogen into sugar and that with a decreased liver activity an additional functional activity of these islands is stimulated and they in consequence become hypertrophied.

(4) It is probable that diseases of the liver occur prior to cirrhotic changes in the pancreas as shown by certain cases in which the islands of Langerhans are greatly enlarged, but otherwise unaltered, though surrounded by dense bands of fibrous tissue.

(5) It is probable that an increase in the number of islands of Langerhans occurs through the transformation of the acini of the pancreas with these structures, as is seen in a certain number of cases in which the fibrous tissue of the pancreas is not increased, though an unusual abundance of *interacinous* cell groups are present.

(6) Severe involvement of the islands of Langerhans in a hyaline degenerative process may occur without the usual resultant, diabetes. This is explained by the fact, in one case presented, that the unaffected islands have undergone an immense hypertrophy, this fully compensating for the lost, or limited, function of the affected islands.

(7) The property the healthy islands of Langerhans possess of undergoing a compensatory hypertrophy explains in some cases of diabetes the lessening and even the final disappearance of the sugar in the urine. This

property of the healthy interacinous cell groups of the pancreas also explains the rationale of the treatment in certain mild forms of diabetes by restriction of a carbohydrate diet. The non-occurrence of sugar after return to general diet may be taken as an evidence that a sufficient degree of hypertrophy has occurred in the healthy islands of Langerhans.

Quinan reports (Sept., 1904, Amer. Jour. Med. Sciences) a very interesting study of a case of *Adams-Stokes symptom-complex* (bradycardia with syncopal attacks). The patient, a baker of seventy-two, was in apparent health and had his first attack while reading a letter containing some bad news, on his way to work. He became unconscious, fell to the ground, but was able in a few moments to go to his work. There were many recurrences of the attacks, often several in a day. There was a mitral systolic murmur present, the radial and femoral arteries were soft, but the temporals were hard and prominent. The blood condition was good and the kidneys indicated a chronic interstitial nephritis. The blood pressure was very high. During the attacks there was at times complete arrest of the heart beat, and this complete asystole was reached by a gradual decline from the usual beat to a complete cessation of the pulse. Therapeutically the case is of interest because digitalis distinctly aggravated the symptoms, while nitroglycerine improved them. The best results were obtained with full doses of potassium iodide, and under its use the case has done very well. It is still under observation.

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Urine Acid Theories, Editorial Journal Amer. Med. Asso. Aug. 20, 1904:

The editor pays a passing attention to Haig's epitome of uric acid, only to deal another blow to a theory which has received such death-dealing ones from Von Norden and other real students of the subject. The presistence of this error can only be ascribed to the usual longevity of mistakes in general and to the difficulty which most men have in readjusting themselves to new ideas and instruments, no matter how fallacious the one may be, or antiquated the other. The editor grants that much good may have resulted from the diet, hygiene and therapy, but very correctly states that "real progress cannot be made on a basis of error and it is necessary to appreciate the fallacy of much of the talk concerning uric acid."

In closing he quotes from Billings: "Some of the fallacies of uric acid are, therefore, (1) That uric acid is toxic, (2) that it is a causative factor of any disease but gout, (3) that uricacidemia, meaning acid blood, does not exist, (4) that the chemical reaction of the blood may be altered by the medicinal qualities of

the alkalies or by diet, (5) that uratic deposits may be dissolved out by the administration of alkalies, (6) that Lithia is a uric acid solvent of unusual potency, (7) that uric acid is an abnormal constituent of the urine, (8) that an excess of uric acid in the urine at any one time, or a deficiency at another time, indicates an abnormal condition in reference to uric acid, (9) that rheumatism is due to uric acid."

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Dr. J. B. Murphy reports a case of *tetanus* successfully treated by aspiration of the cerebro spinal fluid, and injection of morphin, *eucaïn*, salt solution. *Journal of Amer. Med. Asso.*, Aug. 13, 1904. The patient, a boy of seven years of age, had injured his foot in crossing a dirty street. Six days after the accident the symptoms of tetanus set in with distinct severity. The surgical treatment consisted in reopening and cleaning of the wound, from which some debris and broken glass were removed. The cultures made from the pus and scrapings showed no tetanus bacilli. The antitetanic serum was used without effect, though the author does not state what method of using it was followed. On the following day a lumbar puncture was made and 16 c. c. of a turbid fluid was drawn and 3 c. c. of the following solution was injected:

R. B. Eucaïn gr. ss.

Morph. Sulp. gr 1-3.

Sodic. Chlor. gr iii.

Aq. Destil. oz iii ss.

This solution was sterilized by boiling.

This solution was used in doses of 4 c. c. pro re nata for the subsequent week when the spasms ceased and the patient made a good recovery. Dr. Murphy states there was no headache, sweating or collapse which so frequently follow the spinal injections of cocaine. The injections immediately relaxed the spinal muscles and these muscles remained relaxed for a considerable time and enabled the patient to secure a restful sleep.

Dr. Murphy's experience in this case leads him to make what appears to the writer a valuable suggestion as to the treatment of epidemic cerebro spinal meningitis. He proposes "First, to make a drill puncture of the cranium over the latteral ventricle and insert a fine needle until the cerebro-spinal fluid escapes; Second, insert a needle into the spinal canal in the lumbar region and allow a normal salt solution to flow under hydrostatic pressure, from the needle in the right ventricle, down through the foramen of Magendie, and the spinal canal, to, and out of the needle in the lumbar area." Irrigation of the spinal canal has been attempted before, notably by Cushing in the treatment of cerebro-spinal meningitis and Manges has recently reported a series of

three cases successfully treated by a 1 per cent lysol solution, but no procedure has come under the writer's notice which contemplated as thorough an irrigation of the whole cerebro spinal axis as this. Dr. Murphy has demonstrated its possibility on the cadaver and it is to be hoped that it will prove as successful in the treatment of this terrible disease as it appears rational and feasible.

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Koziczowsky contributes an important article on the *clinical examination of the stools* to No. 33 *Deutsche Med. Wochenschrift*. The value of the microscopical and chemical examination of the stools has scarcely been appreciated in this country as in Germany. Its great value in the diagnosis of parasitic diseases of the intestinal canal has been demonstrated by Stiles in the discovery of the *unicinaria Americana* (*anchylostomum*), by Dock and others as proving the indigenous origin of amoebic dysentery and in many other ways. Free blood is never a normal constituent of the human stool and waiving apparent pathological states in the lower bowel and its possible derivation from food, its presence by either microscopical or chemical means may prove a valuable link in the diagnostic chain in certain occult gastro-intestinal conditions.

Koziczowsky finds the guaiac test for minute amounts of blood rather unreliable and prefers the test made with aloin derived from Barbadoes aloes. To this end the patient is placed on a diet, which consists largely of milk, bread, eggs and fruit, no green vegetables, in order to exclude chlorophyll, and with these meals a small amount of charcoal is given so that its presence in the stool will enable the observer to tell when this particular stool is passed. After a few days of such feeding he makes his test as follows: About five grams of the stool is freed from fat as completely as possible by treatment with ether and after the decantation of the ether the residue is treated with about five grams of glacial acetic acid, and to this is added after a few minutes' digestion five to ten c. c. of ether. Should the mixture not separate well on standing it is advisable to filter off the acetic ethereal portion. To the filtrate is first added 1 to 1-2 c. c. of ozonized oil of turpentine and then 1-2 c. c. of 3 per cent. solution of aloin in 60 per cent. alcohol. These operations are best carried out in tapering tubes such as are used in the centrifuge. The reaction manifests itself in one of three ways:

First—The oil of turpentine may float on the surface of the extract and at the junction a clear red zone is found.

Second—The oil of turpentine may mix with acetic ether extract, when the aloin will color the entire fluid red.

Third—The oil of turpentine may sink and at the lower portion of the meniscus, or tip of the test tube, the red color will appear. "The positive results appear at times immediately, at other times after a lapse of three to five minutes." The author states that he finds by this method blood almost constantly present in carcinoma of the intestinal tract in distinction to its occasional or intermittent appearance in gastric or intestinal ulcer. It is especially useful in the differential diagnosis of gastralgia, or nervous affections from malignant disease, ulcer or cholelithiasis, etc. The same methods of procedure may be used for testing for blood in the stomach contents or washings, even if they contain much H Cl, and the author finds as a result of extended trial the aloin test far superior to the older methods with guaiac resin and thinks it ought to supplant the latter.

The question as to the length of time food requires to traverse the entire gastro-intestinal tract has hitherto not been sufficiently considered in clinical diagnosis. Beyond the original work of Strauss and Maurel on this subject little has been done. According to this author, the normal time on a mixed diet varies between ten and twenty-five hours. On an absolute milk diet Maurel found the average time between thirty-six and forty-eight hours, while Strauss found on a meal of one hundred grams of scraped meat the time varied from ten to twenty hours. In some cases of constipation the time required for traversing the digestive canal was sixty hours, or more—again in certain diarrhoeal conditions the period sank to four hours.

The time element, the author considers, and apparently with reason, is of as great importance as the number of movements per day. The diagnosis of latent forms of constipation and the clearing up of many of the nervous symptoms associated with this trouble may easily follow the establishment of the diagnosis. The method for determining this period of time is very simple and consists in giving with the test meal a capsule containing 5 i-2 grams carmine. The first red-colored stool he considers as the line of demarkation, or the time required for the particular meal to have traversed the entire gastro-intestinal canal. The ease with which this test may be made and the value of the information it is capable of imparting seem to warrant its wider use among practitioners.

ELECTRICAL RAYS.*

By H. H. ROBERTS, M. D., LEXINGTON, KY.

Within the past few years possibly no discovery has attracted greater interest and produced more enthusiasm, in the medical world, than Electrical Rays. So plausible have been the assertions of many in this field of work that not only the medical profession but the laity have been led to believe there has been discovered a cure, if not a specific, for many of the maladies for which the Electrical Ray seemed indicated. Let us briefly, in chronological order, study the history of this subject. To enumerate what has been written, the experiments made and work done by the scientific workers in this country and in Europe would require more time that could be possibly allotted to this paper. I shall, therefore, state some of the more important reports and uses of this, possibly the greatest discovery in Electrical Energy, which the world has ever known. After the announcement was made of the discovery of Roentgen Rays in January, 1896, many were skeptical as to its future. Others were content to believe what they saw and the possibilities of the X-Light was little dreamed of. At this period the expense and inconvenience of procuring a suitable *aparatus* was one but few could afford. Therefore, the early work was confined principally to the larger cities. During this period of the X-Rays, examinations were confined exclusively to the photograph plate, as the fluorescent screen was then unknown. Upon the discovery of the fluorescing screen we added to the X-Ray an important factor. Those who were fortunate enough to possess an *aparatus* could now exhibit it as an expensive luxury, to those of sufficient curiosity, by having them look through blocks of wood filled with nails, or through shoes, purses, etc., especially so, during the long intervals between patients in possession of the necessary material examination. That it was useful in locating foreign opaque substances, recognizing the position of a fracture or dislocation was an admitted fact. With the perfecting of the *aparatus* for producing the X-Ray, the medical world recognized in the X-Ray a medium of great importance not only in locating foreign missiles, fractures, etc., but one of the greatest aids to diagnosis yet discovered.

Many of you can recall the fruitless probing for a bullet, the painful manipulating of swollen limbs to determine whether a fracture or dislocation existed. The X-Ray has not only made this procedure painless but accurate and clear to the surgeon. Many are the operations made in the past for Renal Calculi

* Read at the meeting of the Kentucky State Medical Association, Lexington, Ky., May 18-20, 1904.

to find that either there was none present or the Calculi was situated in the other kidney, or some remote part of the Urinary Tract. Many cases of suspected gall stones have been operated upon only to find that there were none present. With the proper use of the X-Ray such mistakes can now be avoided. Diseases of the bone can be studied, central abscesses located, Sarcomatous and tubercular deposits easily defined, in fact, it is only by the use of the X-Ray that we can make a diagnosis with any degree of certainty in diseases of the bones. The skiagraph will not only clearly show the large fractures but it is especially useful when there is a chipping off of small fragments in contused fractures. I recently saw a case of this character which had been treated for several weeks as a sprain. The skiagraph will not only show the position of these small fractures but prove positively that such conditions exist. In all conditions of deformities of the bones from injury we should make a comparison with the healthy bone of the opposite side, by a skiagraph of each, for only in this way can the amount of the deformity be accurately measured, and may be useful as a comparison during treatment. Cavities which are impossible to explore except by an operation, such as frontal sinus, sphenoidal, etc., can be made as clear as if they were situated in a transparent medium. In many diseases of the heart and lungs a diagnosis can be made with a reasonable assurance of certainty by the use of the X-Ray. Enlarged glands, aneurism, blood clots and kindred conditions may be diagnosed. In fact, almost every organ of the body can be examined as accurately by the improved and perfected fluorescing screen as the bones were, a few years ago, by the photograph plate. Possibly in no other branch of the possibilities of the X-Ray, has it been of greater benefit than in Orthopædic Surgery; conditions which were obscure and puzzling to the surgeon are now made perfectly clear. Especially is this true since the tidal wave from Prof. Lorenz spread over the country. The Radiographing of the hip, ankylosed joints, swoolen parts, etc., present an entirely different aspect of these conditions than in former days, when the surgeon depended solely upon motion, pain, and sensation of touch.

If the X-Ray should prove to be a failure as a therapeutic measure, it has come to stay as a means of diagnosis in Orthopædics. We know that deformities resulting from careful or careless practice form the greater portion of the causes for damage suits. The surgeon, no matter how skilful, works in the dark and is guided only by his practiced touch, but by the use of the skiagraph or fluorescing screen the condition is clearly revealed and can be perfectly adjusted, and he has his skiagraph to rec-

ord these conditions. If a patient disobeys instructions and secures a bad result there is no valid claim upon the surgeon and mal-practice suits will cease to be annoying.

I have found in stomach work the X-Ray of the greatest value in diagnosis. Oesophageal Stricture can be accurately located. Stricture of the Cardiac and Pyloric portion of the stomach easily defined. With capsules filled with Bismuth I have been able to study the motility of the stomach and to follow the capsule at intervals through the alimentary canal. Faecal Impaction and Intestinal Tumors can be defined and accurately located. Tubercular Ulcerations, Pneumonia Consolidation, Emphysema, Pleuritic conditions, Spinal Hemorrhage, etc., can all be diagnosed by a proper *aparatus*. I desire to impress upon you the possibilities of the X-Ray as a diagnostic agent and the importance of a closer and more diligent study of this medium. I believe the time is at hand when the conservative surgeon would as soon think of laying aside his splints for fractures as a proper X-Ray skiagraph. It is just as important for the physician, for by the aid of the X-Ray as an able assistant much in doubt can be set aright.

With the perfect *aparatus* now on the market and the reasonable expenditure necessary to have such an *aparatus* surely no one need have an excuse for not having an X-Ray outfit in his office. Much of the importance of the X-Ray as a diagnosis agent has been lost in the mad rush of enthusiastic workers to the field of experimental therapeutics. We have two classes of workers in this field: first, those who have entered the field of this new therapy with undue enthusiasm and their reports are unreliable on account of this enthusiasm. The second class of workers are those who seeing in the X-Ray a means of possibly impressing an unsuspecting public by means of an elaborate X-Ray outfit, do not hesitate to praise the value of this new agent to cure all the ills to which the body is heir.

During the past year medical literature has been filled to overflowing with articles upon the value of the X-Ray. We must separate the true facts from those statements which are misleading and therefore unreliable. That there are reliable, scientifically trained men in this work no one can question but these men are still silent as to the true value of this new agent in therapeutics. We read the report of the most successful treatment of a case to-day, to-morrow a similar case is treated in the same way, they are not only not benefitted but perhaps hopelessly burned. Here is a man who has worked constantly with X-Rays for two years without a burn perhaps exposing himself for hours at a time to the Rays, all at once without any apparent cause he is severely burn-

ed and perhaps maimed for life. That the X-Ray has Therapeutic value is unquestionable but the host of maladies which it is said to cure is wholly untrue. That cases of lupus have been cured by X-Ray cannot be denied, Epithelioma, Rodent Ulcer etc., good results have been secured; in the same class of cases profound toxemia has resulted, in others the growth seemed to be checked, or after disappearing has returned again. In other conditions they improved for a time then remained at a standstill and repeated treatment made no improvement. Tubercular glands, joints, etc., have been greatly benefitted and in many cases apparently cured. In Leukemia both the lymphatic and splenic medullary very favorable reports have been made.

In a case of my own at the beginning of treatment with the X-Ray the blood examined showed:

Hemoglobin	80 p.c.
Red Cells	3,418,400.
White Cells....	207,200.
Large Lymphocyte	40.6 p. c.
.....	97.4 p. c.
Medium Lymphocyte....	56.8 p. c.
Polynuclear Lymphocyte...	6 p. c.

Red cells of normal size but deficient in Hemoglobin.

After three months treatment three times a week the blood examination showed:

Hemoglobin....	80 p. c.
Red Cells	3,480,800.
White Cells	93,120.
Large Lymphocyte	6.5 p. c.
Medium Lymphocyte	91.5 p. c.
Polynuclear Lymphocyte...	1 p. c.

The spleen at this time had been reduced to less than one-half its former size, which was $9\frac{1}{2}$ inches below the normal position. An attack of pneumonia stopped further treatment.

The only authentic cases of malignant conditions which are benefitted by the X-Ray are external. The effect upon the deep-seated growths situated in the liver, stomach, uterus, etc., has been such as to give but little promise for a cure. In Dermatology reports are so conflicting, and in many cases, so appalling that one stands aghast at the two edged sword effect which this agent presents. We never know what harm is being done until after it is done. Dr. Garrett, of Texas, reports a case of one of the most prominent men of his city, who was in perfect health with the exception of a chronic eczema which he had had for years and the only trouble he experienced was an annoying pruritis. The X-Ray was used to relieve this condition. After a few exposure he was burned on every part of the body where the rays had been applied. The true skin sloughed off leaving an angry, raw, discharging surface which continued, notwithstanding

the most skilful and scientific measures were used to correct the damage. The patient died in three weeks after suffering untold agony. Another case reported by Reihl in which the soft tube was used for ten treatments, the eczema temporarily disappeared to be followed by extensive gangrene, after the sloughing had taken place and the parts healed, and ulceration appeared at intervals. Over a year after the treatment the exposed parts became atrophied. The skin contracted until flexing of the elbows was much reduced and the chronic eczema returned involving other parts of the body as well. Freund and Oppenheim describe the burns of the X-Ray as the result of disturbances in the circulation produced by the exposure. This condition of affairs is particularly likely to occur when the Rays are most intense in the upper layer of the skin. Besides atrophy, they claim a form of Angioma is particularly likely to occur and thus far no remedy has been found to cure or correct this condition. Freund and Oppenheim recommend the using of rays which effect the deeper tissue and are not exhausted on the superficial layers. We read of many of the so-called cures but few have courage to publish their failures. What we need is the report of the failures.

No one should attempt to treat skin conditions with the X-Ray without he is a trained and expert Dermatologist and any condition which is amendable to other therapeutic measures the experiment treatment with the X-Ray should not be attempted. We are only beginning to see the results of the damage which this force is capable of doing especially when in the hands of untrained and unskilled men, who are not only causing suffering to the already sorely afflicted ones but causing themselves permanent bodily injury. Therefore, is it not best to be cautious with so dangerous a remedy? Those who desire to use the X-Ray, who are willing to take the risk should study carefully every step and not treat every enlarged gland and pimple with the X-Ray simply because it is new and the moral tone is inspiring to the laity. I believe much valuable time is lost and frequently irreparable damage done by the experimental treatment of the operable cases of malignant growth, and under no circumstances do I believe conditions which are amendable to the surgeon's knife should time be wasted with the X-Ray, for while in some cases the X-Ray will melt down cancer cells, we must remember its penetrating power and the possibility of disseminating cells in other parts of the body. Careful Raying before and after operating may prove of great benefit and has given excellent results in many cases. However, in all external growths which are not amendable to other measures the Rays should be used by all means. For the

results thus far exceed any remedy we have yet discovered. However, we should be conservative and not be too fast nor yet too slow to accept the merits this therapeutic measure presents to us.

Following upon the X-Ray as a therapeutic measure comes the Ultra-violet rays. A report from the Finsen Light Institute, of Copenhagen, states that out of eight hundred cases treated for lupus, fifty-one per cent have been apparently cured, thirty-five per cent benefitted, and in only five per cent, has the treatment proven unsatisfactory. Reports are many of the results of the ultra-violet light. The inhibitory action of the tubercular bacilli is positive, but the effect upon deep-seated conditions is not yet conclusive.

The Finsen Light has proven of greater benefit in skin cases than the X-Ray. The violet and the ultra-violet rays are the only rays which have proven bactericidal. What these rays may produce in the future with improved and less expensive *aparatus* we cannot conjecture.

Wonderful as the X-Ray and the other Rays may seem we have gone another step into Nature's hidden mysteries—Radium. The others have been brought about by the genius of man but in radium we have Nature in her true self, which has seemed to defy the most substantial laws of natural science. Coming as it were out of nothing, having the power of producing and throwing off heat, light, etc., without a source, it is indeed a remarkable discovery. Prof. Curie explains the proper ties of radium by "Perpetual molecular transformation." There is no other explanation for this spontaneous generation of heat, light, electricity, and the enormous energy contained therein. It will melt its weight of ice every hour, cause the fluorescing screen to glow, penetrate opaque substance, and act upon a photographic plate. It causes all metallic substances within a certain distance to become radioactive, has the power to imparting this radio-activity to other substances for several days after being exposed to its rays. It has proven of marked benefit in lupus and rodent ulcers, and in many respects is similar in its effects to the X-Ray. In the short time Prof. Curie announced his discovery to the world we read startling accounts of its effects. Danysz and Bohn show that radium kills many larvæ and embryo, or modify their development by overstimulation into monstrosities. Bohn claims that it is intensively active on proliferating tissue and cells. It prevents the development of the vacilli anthrax, kills prodigious bacilli. That it will produce serious burns has been demonstrated. It has so many various powers, freaks and fancies that we cannot but wonder what next. What it may do

in the future as a therapeutic agent or a commercial commodity no one can prophesy.

Its great scarcity and enormous cost will do much to prevent the indiscriminate and wholesale reckless experimenting upon humanity. Let us hope that it may indeed be the philosopher's stone, as some have ventured to say. Be that as it may we are safe in saying that we are approaching a new field of study, one for careful and sober thought for Nature is unveiling to us some of her choice mysteries.

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DISCUSSION.

Dr. Curran Pope, Louisville: I would like to say a few words in regard to the X-rays. I have been using them for a number of years. I agree with the essayist that the X-ray specialist should occupy a position subsidiary to the surgeon. It is his duty to join in with the surgeon, and in cases which cannot be relieved by surgery, if the X-ray holds out any hope of relief, it is their duty to do everything possible to bring about that relief.

We find here and there in the literature, a case of carcinoma reported as cured. Skinner has reported quite a number of cases successfully treated.

I am going to ask all those who use the X-ray a question which was brought out by the essayist; How can we, using the X-ray, assure any patient coming to us that we will not do harm? I take it that it is the duty of every man to tell the patient the liability of harm, and we could make it clear to him that he may have in his skin peculiarities that will develop dermatitis upon the slightest exposure.

We have no more right to say to a patient, "I will do no harm" than we would to say, "I will not lose a drop of blood" in doing an operation.

One word in regard to radium. It is a beautiful subject. It is my opinion that it is going to prove one of the most disappointing things that has been presented to the scientific world. If it does accomplish the one thing which the profession hopes it will, it has done enough; that is reach carcinomatous conditions that the X-ray cannot, it being capable of applications to inoperable conditions in cavities; places where we cannot get at growths with the ordinary tube. It seems that we ought to keep down the lay idea of something marvelous in radium. There would be a double advantage in doing this, from the fact that if we do not put this knowledge before the people, as a protection, we will find that the men who do not represent the best element of the profession will take it up, using it in a way that will bring discredit upon the profession.

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Dr. A. T. McCormack, Bowling Green: If I were a patient listening to the statements of the essayist I would feel doomed if the X-ray treatment were suggested. If I had an incurable disease I would die surely unless I accepted the

equally terrible alternative of being treated by the X-ray and burning up. Does not the paper rather suggest that you will be damned if you do and damned if you don't? Personally, I believe that we need not fear the X-ray burn only in very rare cases of marked personal idiosyncrasy. I have been using the rays for six years, and in a great number of cases, and have only had one burn and I produced it intentionally and with the consent of the patient. This was in a cancer of the breast recurring after operation. The burn healed without difficulty.

The X-rays will probably be used more as a diagnostic agent in the future than as a therapeutic agent, especially in the diagnosis of tuberculosis is it of great value, as evidences may be found with the screen several weeks before any physical signs can be detected. I have recently had a confirmation of a diagnosis of this sort that I made several months ago, which was denied at the time by two of my very prominent conferees. The shadow diagnosis was plain and there was complete absence of physical signs. The patient took the advice of my colleagues and will leave, in a few weeks, for the West to try to recover from a disease diagnoses too late.

As to the uses in fractures it is so essential that a surgeon who does not avail himself of it is culpable. A patient in Memphis fractured the index finger of his right hand. He was attended by a distinguished surgeon who sent the case to me upon the patient's return home. Upon examination I found that the proximal phalanx had been fractured in two places, one of which had been set perfectly, while the other had not been detected on account of the swelling. It was very difficult to reduce the displacement. In many such cases as this the result of the use of the X-ray would save either a deformity or the loss of a limb.

I would like to tell also of some interesting failures and successes in the treatment of eczema, pseudo-leukemia, lucas, and other superficial diseases, but I feel that I have already encroached too long on the time of the Association.

* * * * *

Dr. Roberts said, in closing: I did not mean to say that it had no effect upon internal growths, but that the effect was not sufficient, to give much promise for a cure.

In reference to the burns which Dr. McCormack mentions, I would call attention that it was not the ordinary dirmetitis which I had reference to, but the burns which come on six months or more after the treatment; these are the ones which we have to fear.

"THE CHAMPION FIT THROWER OF HARLEM."

It is stated recently that on a public street in New York a man was seen to fall apparently

with a convulsion. A crowd of curious persons gathered about him, many of whom were women, who expressed sympathy for the unfortunate man; an ambulance was ordered, and when the ambulance surgeon saw the man he recognized him as one known as the "champion fit thrower of Harlem." The bystanders, especially the women, were angered and called the surgeon a "brute," who, yielding to their wishes, took the man to a hospital. Various devices were adopted there to prove that the patient was not in a genuine fit. He withstood the sharp jabs of pins and the torture of fire without a wince, but when one of the surgeons suggested putting the man into a scalding hot bath he jumped from his cot and tried to flee from the room. Then he acknowledged the sham, and was sent, a prisoner, to jail.—*American Medicine.*

ERGOT IN TYPHOID FEVER.

A. T. Livingston urges the immediate and continued use of ergot in typhoid fever. He believes the peculiar function of this drug to be the stimulating, toning, and strengthening of whatever unstripped fiber is weak, relaxed, stretched or paralyzed. The solution of ergot which he finds the most satisfactory for hypodermic use is made by dissolving 1 dr. of solid extract of ergot in 1 oz. of sterilized distilled (cooled) water. After filtering the solution, add 2 m. of chloroform. The dose is 1-2 dr. to 1 dr., which may be given from 2 to 6 times a day, or oftener, as indicated in the individual case.—*American Medicine.*

ACOIN--COCAIN IN LOCAL ANESTHESIA.

W. Krauss recommends the use of acoin and cocain as local anesthetic in operations in and about the eye. He employs the following formula:

Acoin 0.025 gm. (5-12)
Cocaine 0.05 gm. (5-6 gr.)
3-4 p. c. sol. of sodium chloride 5gm. (75gr.)

The solution should be fresh for every operation. If much hemorrhage is expected a few drops of a 1 to 1,000 adrenalin solution may be added. He has employed it for enucleations, strabismus, chalazia, lid operations, etc.—*American Medicine.*

The *Mississippi Valley Medical Association* will meet at the Grand Hotel, Cincinnati, Ohio, October 11, 12, and 13, 1904. The preliminary program which has just been received, comprises a most excellent number of papers by many of the most prominent men in the broad Valley of the Mississippi. A cordial invitation is extended to all members of the regular profession to join this Association.

KENTUCKY MEDICAL JOURNAL.

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THE SURGICAL TREATMENT OF ANEURISM.

The various methods employed in the treatment of aneurism have all been unsatisfactory, with the exception of ligation and excision in certain cases, until 1902, when Matas published his method with report of cases. Until this time operations for the relief of aneurism had been a record of failures and partial successes, with a large mortality. Starting out with the "old method" of Antyllus, extirpation and ligation of all vessels belonging to the sac, a most excellent treatment where locality and the condition of the sac permit, we have seen the following precedures tried at sundry times: Anel's operation, or proximal ligation in the immediate vicinity of the sac, and Hunter's method, or proximal ligation at a distance from the sac; by this latter method sound arterial tissue is more likely to be found than by the former, though both as well as the extirpation method are often excluded by the site of the aneurism and the part of the vessel involved; in ligation in the immediate vicinity of the sac we are less apt to have return of pulsation to the sac as a result of too rapid formation of collateral circulation, while in ligation at a distance from the sac we may have return of pulsation from too free development of collateral circulation, or sloughing of the sac, or in either case gangrene of part supplied by the affected artery. Brasdor's procedure of distal ligation below the sac, with Wardrop's modification of the same involve the same risks that attend the Hunter method, in addition to the danger of causing an overdistention of the sac with consequent rupture of sac or artery; these two methods are limited to such particular cases as aneurism at the root of the carotid or innominate arteries. The danger of ligation is shown by the limited statistics quoted by Bickham in an article on Arteriovenous Aneurisms; Van Buren reported seven cases of ligation of the external iliac or common femoral artery

for arteriovenous aneurisms, gangrene followed in all; Curtis collected fifty-one cases of arteriovenous aneurisms in general, treated by ligation, of which twenty-three died, eight were cured, two improved, eighteen unimproved, and gangrene occurred in eleven cases; Murphy reports twenty-two ligations of the femoral artery and vein, with gangrene in twelve; he has collected 178 cases of ligation of the femoral artery alone with gangrene in twenty-five; he also reports thirty-one ligations of the femoral artery for aneurism, with hemorrhage in 60 per cent., and death in 40 per cent.

Recognizing then the great danger of the ligation methods, and the futility, as well as danger, of such methods as acupuncture, galvano-puncture, direct pressure, etc., the work of Matas is to be regarded as a distinct epoch in the treatment of this disease. Doerfler has demonstrated that suture material may safely be carried through all the arterial and venous coats without producing thrombosis, and following this, successful artery and vein suturing has been practiced, until now we are in a position to treat aneurisms, whether they be fusiform or sacculated, arteriovenous or varicose, and not only preserve the integrity of the artery and vein, but save the patient the risk which the loss of circulation through them would entail. In cases of traumatic aneurism the obliteration of the sac with closure of the artery after Matas' characteristic method is desirable, but in cases of arteriovenous and varicose aneurisms Bickham has suggested the application of the principles of the Matas operation in such a manner as to preserve the lumen of both artery and vein, thus ensuring the patient the integrity of the part supplied by the affected vessel. The Matas method applied to sacculated, fusiform, or traumatic aneurisms combines the advantage of ligation and excision, is easier, safer, and may be made more conservative.

IRVIN ABELL.

A PLEA FOR A WIDER MEDICAL HORIZON.

Why logic and philosophy are not included in the curriculum of our medical universities is incomprehensible to me, for they are of vital importance to the practicing physician.

Botany should also be added, and if taught in the field by an able man, instead of over much laboratory work, would greatly widen the medical student's mental horizon by showing him the intelligence of natural law as displayed upon plant life, etc.

Professors of medical universities should emanate from the ranks of the general practitioner and their appointment should be

based on merit alone regardless of location, and the specialist also should be an experienced general practitioner.

The student who intends to enter the profession of medicine, should first be convinced that he is fitted for the calling he intends to follow, and should not be drawn thereto by false pride or vanity, just to be called a "doctor" or have an easy life-job, for he will be sorely disappointed. Any man who has not a deep feeling of sympathy for his fellow man in affliction, and who is not willing to give his best work to the poor, day and night, rain or shine with little or no remuneration for an unlimited number of years, has no place in the profession of medicine.

From a business standpoint medicine is a poor investment but a noble calling.

C. H. TODD.

A PLEA FOR ASEPTIC OBSTETRICS.

The term Blood Poison is responsible to a great extent, for the rapidity with which the laity has learned the necessity for asepsis in surgery. The fact that neglect in the treatment of minor injuries results in an extension of the inflammation and a constitutional condition, which they know as blood poison, has taught them the necessity of strict cleanliness in everything pertaining to surgical matters.

In consequence, when a minor operation is performed in the home of even the humblest, there is little difficulty in getting an abundant supply of hot and cold water, soap and towels, whilst for a major operation they readily agree to have the patient removed to a hospital or infirmary.

It is unfortunate then, that this wholesome fear of infection has not also influenced them in relation to another procedure which all well informed men will admit, borders closely upon the surgical and that is, the ordinary case of labor.

It must now be conceded that the conduct of such cases is practically in the hands of the medical profession, the mid-wife is only encountered in rare instances in this region at least.

It is the acknowledged teachings of all authorities upon Obstetrics, that the ordinary labor case, should be conducted with all the aseptic precautions, that are customary in major operations and yet every physician will admit that in the daily walks of life in the conduct of such cases, he does not even meet with ordinary cleanliness.

This neglect can be ascribed in great part to the fact that the laity still adheres to some of the old traditions. They will still ascribe an elevation of temperature on the third day to the formation of milk in the breasts and a

fever after that to malaria or the grace of God. Let them once understand that these complications in child birth are due to infection and the extension of an inflammation until the blood becomes charged with poisonous matters and that in this condition blood poisoning is more to be feared and is of graver consequence, than in the minor injuries in which they are wont to see it, then a wholesome change in conditions surrounding the lying-in-room will surely follow.

In order to bring about this result, let the medical profession explain to the laity, the necessity of absolute cleanliness, not only on the part of the patient but the nurse and physician as well and let it be understood that a fever in the course of such a case is due to a violation of this principle by one of the three concerned and after it occurs let the infection be called blood poisoning as it is in the other instance and the wholesome fear inspired by the term may result in lasting benefit to all concerned in obstetrical work.

EDWARD SPEIDEL, M. D.

NOTES.

The following letter has been sent to the secretary of each county society in the State of Kentucky:

Dear Doctor:

I beg to call your attention again to the plan outlined in the July issue of the Journal of getting up a list of representative men in Kentucky for the purpose of having them visit at various times the different county societies in the State. It is believed that this will be appreciated by the county societies and will do much to keep up interest in the county society and in the State organization. In order to have the plan succeed it is essential that the county society should hold its meetings at stated and predetermined intervals. I, therefore, request that you get your county society to make up a schedule for the coming year, showing exactly the time and place when each meeting during the year will be held. It would also be most advantageous for the essayists for each occasion to be named in advance. The essayist, of course, could be permitted the liberty of selecting his subject at a subsequent date. If you will have this done I shall endeavor to have cards printed for each member of your county society showing the date, place of meeting and the essayists for each meeting of the coming year. When all this has been done I will then ask you to make request of this office for a representative man to meet with you at such time and place as you designate.

I also beg to call your attention to the fact that the Program Committee will desire nomi-

nations from the county societies for places on the program for the annual meeting in 1905. County secretaries are requested to be on the lookout for good papers and capable essayists for the program next year.

The Kentucky Medical Journal also desires good papers read before county societies, for publication, and you are requested to send in all such as soon after they are read as possible.

Yours truly,

JAMES B. BULLITT,
Secretary,

REPORT OF "AN UNUSUAL CASE OF PLEURITIC EFFUSION."

By J. M. PECK, M. D., ARLINGTON, KY.

On August 15th, 1903, was called to see Mr. T. M., age. 26, and married. The family history indicated a predisposition to lung trouble. The clinical history showed him to have been the subject, on July, 1901, of a severe attack of pleurisy in the left side which lasted him about three weeks and was followed by a troublesome cough. He was also the subject of tuberculosis, and subsequent to the attack of pleurisy had gone to New Mexico and Arizona in the hope of regaining his health, but feeling that he was continually growing worse, he returned home and went to Louisiana for a short stay only, as he failed to derive any benefit from it.

He was able to be up for about twelve months after returning home but was unable to do any kind of manual labor any of the time.

He had been confined to his room only a few days prior to my first visit. I found him very much emaciated and also stooped to such an extent that the intercostal spaces were almost completely obliterated by the overlapping of the ribs. He complained of not having been able to sleep any for thirty-six or forty-eight hours on account of extreme difficulty in breathing. He remained in the sitting position constantly as any attempt at reclining caused his breathing to be so difficult as to be unbearable even for a moment. His expression was one of unusually great distress and anxiety.

There was only very slight bulging of the intercostal spaces of the dorsal surface of the left side. Percussion elicited the characteristic flat sound you would expect to hear when the pleural sac contained liquid.

Just below the inferior border of the twelfth rib of the left side there was decided pointing but no discoloration or undue redness of the surface.

The elevated surface was some three inches in diameter. After thorough sterilization of the parts, a small aspirating needle was in-

serted within this pointing area to the depth of one inch and the syringe drawn full of a rather thin turbid liquid. Notwithstanding the very low point at which this liquid was drawn off, it was the opinion of the writer that this fluid came from the pleural sac and that the distressing condition of the patient was due to the pressure of this liquid on the other-wise diseased lungs.

Another thing that strengthened my belief in the correctness of my diagnosis was, he and his wife both stated that they had often "heard the water slosh in his side and chest when he would make a quick move of the body."

He further described it by saying that he often felt the motion of the liquid in his chest when he would shake his body.

As no such sound could be heard at this time, it was apparent to me that this was prevented by the sac being too tense to admit of any movement of the contents only as the sac itself moved.

There being no doubt in my mind as to the nature of the trouble, and believing that he could bear the complete evacuation of the sac, although contrary to the teaching of some, it was decided upon and the strength of the patient re-inforced by a hypodermic injection of strychnia 1-60 and morphia 1-4 grain, also one drachm of the aromatic spirits of amonia was given per ore. Everything being ready a verticle incision large enough to admit my little finger was made just below and about midway of the twelfth rib of the left side. At first, the contents of the sac was discharged with a gush, so great was the tension. In all, about two and one half gallons of this turbid and slightly offensive liquid was discharged at this time.

The sac was then washed out with a 1 to 10,000 bichloride solution and a drainage tube inserted into the opening and made fast to a sterilized dressing.

After the application of the dressing the patient expressed himself as feeling greatly relieved, notwithstanding at one time during the evacuation of the sac, death from colapse seemed imminent.

The sac was washed out every day for five successive days, at the end of which, there seemed to be very little if any discoloration of the water used in washing it out. The drainage tube was left in situ so that this fluid might not again collect in the sac.

After the third week the drainage tube was discarded as he said he could not keep it in place any longer.

During the first six weeks following the operation, the patient gained ten pounds in weight and some strength. At the end of the third month he came to my office for further

treatment and I found there had been more accumulation of the fluid in the pleural cavity, but this time there was no evidence of any below the ribs. As he was very feeble, and thinking he would probably die of tuberculosis before the accumulation would be sufficient to cause any considerable distress, he was advised to wait a few days at least before having the sac tapped again.

A month later I was again called to see him and found considerable fluid in the sac but none would escape from the old point of puncture which he had had his wife re-open before sending for me.

At his earnest solicitation another incision was made, but this time between the ninth and tenth ribs of the same side as before. Three pints of the same character of liquid as the first was discharged.

The patient never seemed to gain any more strength, but on the contrary became more feeble from day to day until the 19th day of January, 1904, when he died of tuberculosis.

Some of the points which occur to me as being unusual in this case and to which I wish in as brief manner as possible to invite your especial attention are: first, the low point to which the fluid had gravitated, so low indeed, and with such slight bulging of the intercostal spaces as to lead one physician into a diagnosis of "Lumbar Abscess."

Two other factors, perhaps, which aided in bringing about this condition were the feeble lifting power of the tuberculous lung and the contracted chest wall, which two things or conditions, tended to remove the natural support of the diaphragm.

Another point of interest is the enormous quantity of liquid that was present in the sac, being many times more than the writer expected before beginning the operation, and about double the amount it has been my privilege to have seen reported by any one.

One of the strangest as also the most agreeable incidents in this case to me was, that the sudden withdrawal of such a great quantity of fluid from around his lungs, in his weakened condition, did not cause sudden death from shock.

ACCIDENT STATISTICS IN CHICAGO.

An analysis of the 10,707 accidents recorded last year in Chicago is presented in a report just submitted by the Civic Federation. The largest number of accidents from any one cause, it was found, was under the head of "run over or struck by street cars," with a total of 457. Next, despite all the track elevation in the city, came accidents from railway trains or engines, with a showing of 446. In consequence, of street cars striking wagons 442 injuries were caused.—*American Medicine*.

GUARDS HER FLOATING RIBS.

It is reported that a woman of Boston, 80 years old, and worth \$75,000, is hiding herself because she says physicians want her body to dissect, and all for the reason that her floating ribs have by muscular action been transferred from her right to her left side. She says that recently when she was in a hospital for treatment her malformation was discovered, and she was offered \$2,000 on condition that she would bequeath her body for dissection. She fears that the doctors won't be content to wait until she dies, and so she has concealed herself. Her malformation is said to be unique, in that it has been caused by gradual muscular action.—*American Medicine*.

DANGER OF POTASSIC CHLORATE.

P. Bartholow refers to the frequent errors from confounding this with KCl. Judging from the way in which it develops a toxic strength, it seems likely its molecule is endowed with an uncommon potentiality, for its pharmacodynamic effects are often irresistably sudden and fatal. It passes unchanged through the body. Its use as a gargle has caused death. It may profoundly alter the composition of the blood suddenly and after small doses. It shows its utmost power when taken on an empty stomach.—*American Medicine*.

TO PROVE THE MOSQUITO THEORY.

Information from New Orleans states that Dr. Frederic Forralbas is there from Havana, with a cage full of mosquitos of the variety which it is claimed propagate yellow fever. He is taking them to the St. Louis Exposition, where they are to be used in demonstrating the mosquito theory. The exhibit will renew itself and will be one of the interesting features of the Health Department. Dr. Forralbas believes that the result will be a general admission of the mosquito theory, doing away with quarantines.—*American Medicine*.

WHY THEY FOUGHT THE BILL ABOLISHING THE CORONER'S OFFICE.

In opposing the bill which legislates the coroners out of office and creates a bureau of medical examiners under the supervision of the Health Department, W. M. K. Olcott, at a public hearing recently by Mayor McClellan, declared that the measure had been drawn by the medical societies and that one of its purposes was to furnish more bodies for the medical laboratories of that city.—*American Medicine*.

COUNTY SOCIETIES.

[Secretaries of county societies are requested to furnish for this column, and without further notice, all county society news of interest, such as the date and place of the monthly meeting, notice of death and marriage, epidemic disease, and, in fact, everything which might be of interest to brother practitioners in the State.]

Editor Kentucky Medical Journal

No notice having been forwarded you of the transactions of the *Franklin County Medical Society* since the May meeting, please accept synopsis of subsequent meetings.

The society is increasing in numbers and the marked interest in its proceedings is noticeable and encouraging. In June the essayist was Dr. N. M. Garrett; subject, "Dysentery," which was an able expose of the subject, well prepared, dealing with all the various phases of the disease, while he was in the Philippines as surgeon and on board transports embracing four passages across the Pacific. Discussed by Drs. Ely, Hume and Williams. Clinical cases reported.

Dr. Williams offered the following resolution which was unanimously adopted.

Resolved, That the homeopathic physicians, the pharmacists and the dental surgeons of the city of Frankfort be invited to attend the meetings of the Franklin County Medical Society as its guests, it being the desire of this society to enjoy the most harmonious and social relations with all professions having a like and kindred mission to better the health and sanitary conditions of the city, and enjoy good fellowship and brotherhood in a common cause.

The July meeting was equally interesting, with a full attendance. The paper of the day was "Cerebro Spinal Meningitis," by Dr. O. B. Demaree, and called for warm applause and a heated discussion on the part of the members, which, if it did not add materially to the knowledge of the subject at least gave vent to varied views on the subject—no two agreeing fully on any one point, except that it was difficult to understand its etiology—treatment doubtful—prognosis unfavorable and no one desiring a second case if it could be avoided.

The August meeting was entertained by a paper by Dr. Hill on "Acute Eclampsic Mania," which brought out his experience on the subject very entertainingly from a clinical standpoint while he was assistant at the Lakeland Asylum for the Insane. The marvel of the paper was in the fact that all his statistics and theories were his own, based on personal experience. These were very cordially acquiesced in by those present.

At the close of the discussion Dr. Hill in-

vited the society to hold its next session in his office at the Feeble Minded Institute, which the society accepted in a *pickwickian* sense as being a very suitable place for its assembling.

The essayist for this meeting was Dr. I. T. Minnish, the subject being "Diagnosis and Treatment of Typhoid Fever."

We very much like the Kentucky Medical Journal and congratulate it on its appearance in Vol. II, No. 1, as being better than its predecessors. "*Vale longum vale.*"

U. V. WILLIAMS, Secy.

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The following physicians were in attendance at the meeting of the *Henry County Medical Society*, Monday, August 29: President, Dr. C. R. Martin, Drs. C. R. Johnson, J. C. Cassity, O. P. Chapman, A. P. Dowden, A. M. Zaring, C. L. Crawford, W. L. Nuttall, J. P. Nuttall, Louis Coblin, W. T. Coblin.

Dr. Cassity presented an excellent paper on neurasthenia, which was discussed by all present and generally approved. The paper was highly complimented.

Several clinical cases were next presented, all being full of interest. The consideration of such cases has, indeed, become the principal and most profitable business of the society. The patients are frequently before the body for examination.

Dr. Crawford reported an epidemic of typhoid fever at Bethlehem, and explained its characteristics in an admirable manner.

Officers were elected for the ensuing year as follows:

Dr. J. C. Cassity, president; Dr. A. P. Dowden, vice-president; Dr. Jno. P. Nuttall, secretary; Dr. A. M. Zaring, treasurer.

Very timely and suggestive speeches were made for the good of the society by Dr. Crawford, Dr. Cassity, Dr. Nuttall, Sr., and Dr. W. T. Coblin. Each speaker emphasized the benefits that he had received from attending the meetings of the society, and presented an optimistic view of the future.

Papers for the next meeting: "Typhoid Fever," Dr. Louis Coblin; "Dysentery," Dr. C. R. Johnson.

J. P. NUTTALL, Secy.

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The *Monroe County Medical Society* met at the Clancy House, Tompkinsville, Ky., Thursday, August 18th., eight members present. The regular program was deferred until the next meeting and the day given to the treatment of the clinic as presented.

Dr. Bedford presented a specimen of the cabbage snake, which caused quite a discussion. It was a threadlike worm, eight inches long and about the size of a No. 20 thread.

It is claimed they are found in the cabbage quite frequently, so frequently indeed that the cabbage in the river country where they are most numerous, is being fed to hogs and cattle. Dr. Bedford also presented a little patient for operation—the amputation of a sixth toe on the right foot. The toe was removed and the patient went away confident of his ability to wear his shoe as soon as the foot gets well.

An interesting case was presented to our society in a white girl, twenty years of age, strumous type; family history good, but claimed she had a dropsical condition of the bowels six years ago, or about date of first menstrual period. Comes for treatment of sores on her face. The history is that the sores first appeared on the face two years ago, coming in squares, an inch apart, and an equal number on each side of the face, being only superficial and oozing bloody, watery discharge, drying in a day or two and looking very dark. When the face is well they appear next on the left arm below the elbow and extend to the elbow, coming in squares as on the face but in bands around the arm, still about an inch apart; going next to the right arm, then to the left leg, then to the right leg; never going above the knees and scarcely ever being on more than one limb at a time; going back to the face after about three months. The girl suffers intense pain at menstrual periods, but seems healthy and hearty, with the exception of sores, between periods. Heart all right; kidney action normal; some constipation; circulation and respiration normal. We would like to have the case discussed by the different societies.

The society adopted the Kentucky Medical Journal as its official organ.

E. E. PALMORE, Secy.

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The *Carlisle County Medical Society* met in regular session at Cunningham September 6th, with President Willingham in the chair. Devotional exercises were conducted by Dr. Simpson and the report of the committee on arrangements was made by Dr. Burrow, in which he stated that the Christian church had been secured as a place of meeting and that barbecued dinner would be served on the ground.

A paper on "Typhoid Fever" was read by

Dr. Simpson, which was an excellent one and was discussed by nearly every one present. The society adjourned to partake of the luxuries that had been so bountifully prepared by the good people of Cunningham.

The society was again called to order at 1:30 o'clock, the first paper being an interesting clinic by Dr. Burrow, in which all were interested. The next paper, by Dr. Graves, on "Euremia in the Male," which was thoroughly discussed. Dr. Peck presented a paper on "Organotherapy," which brought out a good discussion.

The President appointed Drs. Mosby, Crouch and Payne as a committee on arrangements for the next meeting, which will be held at Bardwell, December 6th.

Following is a list of the members present: Reuben Burrow, W. T. Graves, G. W. Payne, H. T. Crouch, J. M. Peck, W. E. Gholson, E. B. Willingham, W. Z. Jackson, T. D. Bugg, W. L. Mosby, R. T. Hocker, and T. L. Lamkin.

T. D. BUGG, Secretary.

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The *Muhlenberg County Medical Society* met at Central City, August 10th, 1904, with the following members present: Dr. J. T. Woodburn, of Central City, in the chair pro tem., Drs. H. C. Kennerley, Dunmore; J. G. Bohannon, Greenville; J. W. Koontz, Greenville; S. T. Taylor, Central City; L. Bennette, Central City; J. M. Ferguson, South Carrollton.

There being no papers read the time was consumed in hearing reports of cases and discussing them.

The society adjourned to meet at Central City the second Wednesday in September, 1904.

C. E. O'BRYAN, Secy.

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The *Bourbon County Medical Society* will hold its regular monthly meeting in Paris City Council Chamber, Thursday, Sept. 8th, 1904, at 3 p. m. The following papers will be read: Clinical Case: "Paralysis Agitans, Dr. C. G. Daugherty; "Dental Sepsis, Antisepsis and Prophylaxis, Dr. Dodd Best; "Simple Endocarditis," Dr. R. T. Wood. Discussion led by Drs. Evans, M. H. Dailey and Hunter.

C. G. DAUGHERTY, Sect.

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The Nineteenth Semi-Annual Session of the *Kentucky Valley Medical Association* will be held at Irvine, Ky., October 6-7, 1904.

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The First Annual Meeting of the *Eagle Valley Medical Society* will be held at Sanders, Ky., October 4, 1904.

TYPHOID FEVER.

By M. H. JENKINS, M. D.

Gentlemen:

Assuming that you are all conversant with the text-book treatment of the disease under consideration, I shall in this paper submit only a short expose of my personal observation and experience in the clinical history and treatment of typhoid fever.

I deem it out of place in this connection to attempt to give a history of the disease, and unwise to try to discuss its etiology. Suffice it to say that in my humble opinion modern theories as to its causation often seem to go to pieces under close observation; and the ultimate causation factor is, to me at least, still veiled in obscurity. We meet with the disease as often in the homes of the cleanly and well-to-do, as we do in the homes of the poor and ill-fed. As often in people who drink of seemingly deepest springs and purest milk as in those who drink from mud puddles.

From these and other considerations, the more extended my observations, the more persuaded am I that the disease is mildly contagious.

Clinical History—We rarely if ever see a typical case of typhoid fever; and the disease is characterized by such great variations as to mode of development, combination of symptoms and degree of severity, that we are often in doubt during the first few days as to the true nature of the malady or case; and these variations run through the entire course of the disease.

The period of invasion lasts from a few hours, in some cases, to several weeks in others; and is characterized by persistent and increasing headache and backache along with chilliness, dizziness, muscular pains, nose-bleed, sweating, diarrhoea, colicky pains, vomiting, meteorism, increasing weakness and habitude, indisposition to exertion, disturbed sleep, and impaired appetite and digestion.

We would not expect to meet all these symptoms in any one case; but we can generally find enough of them to confirm a diagnosis, or at least afford a strong suspicion as to the nature of the impending sickness, and thus place us on our guard.

During this stage the tongue is usually but not always slightly coated, and also otherwise shows great variations. It may be narrow, red and dryish; broad, pale and moist, or red and glazed like raw beef. These diverse appearances are so often met, and are so persistent that I am almost persuaded that what is often called the "typhoid tongue" is to a great degree, at least, a matter of imagination.

The beginning of the second stage, announced by the occurrence of fever, is usually not abrupt; but seems to be a gradual development of the preceding stage. The drowsiness deepens with increased dullness of hearing; and we find especially of an evening, the peculiar dusky, dull redness of face which may with propriety be termed the "typhoid flush," and upon which we may place more confidence in diagnosis than upon any peculiar condition of tongue.

The fever during the first few days of its course may be slight with a gradually increasing evening, or morning and evening exacerbation; or it may be ushered in by a temperature of 104 degrees or 105 degrees within the first twenty-four hours of its course. These variations are perhaps dependent upon difference of temperament, as well as difference in degree of infection. As the disease advances the symptoms, if not modified by treatment, gradually increase in severity.

During the first week of actual fever, we usually find headache, more heavily coated tongue, diminished secretions, moderate thirst, complete loss of appetite, and more or less distension of abdomen by the accumulation of gas, especially in right iliac fossa where we commonly find gurgling and tenderness on pressure. The bowels are usually, but not always, constipated at this stage; and when not so, we often have the peculiar ochre colored, alkaline discharges which are almost pathognomonic of typhoid fever.

About the end of the first or beginning of second week, we have diminished headache and backache, and find the peculiar rose-colored eruption on upper part of abdomen and base of chest, rarely extending to the entire body and extremities. This eruption is not met in every case, but will at some period be found in most cases, and when found establishes the diagnosis.

During second week the temperature, if not modified, usually remains high, with an evening, or morning and evening elevation; and if not present from the beginning, diarrhoea may develop about this time.

The pulse becomes more rapid, weaker and less dicrotic; and the tongue may be covered with dark, dry coat, or lose its coat and become fissured, glazed and dry, and its tremulous character announces depression of nervous system.

These symptoms often gradually increase during the second, and continue through the third and sometimes well up into the fourth week, to be followed in favorable cases by convalescence, announced by entire cessation of fever with a return of appetite and digestion.

Treatment—The great number of drugs that have been advocated, and the various

*Read at the meeting of the Monroe County Medical Society, May 19, 1904.

modes of treatment that have from time to time been lauded in the management of typhoid fever lead us at once to the conclusion that no plan has so far met universal recognition and approval. Therefore that class of drugs known as specifics has no place in the treatment of the malady under consideration. The protean nature of the disease as manifested in its different types, in my opinion, renders it impossible to devise a mode of treatment alike applicable to all cases. The fact that there is a similarity and likeness of trend in all cases, and yet each case characterized by individual peculiarities, leads me to earnestly insist that every case be treated broadly upon general principles alike, and yet that each case be individualized, made a special study and treated according to its own indications. Idiosyncrasy, temperament and type must be given due consideration, and from these premises we can adopt a line of treatment suitable to different cases.

The disease being manifestly infectious in its nature, and often attended by a dangerous degree of pyrexia, and consequent prostration, the treatment rationally indicated would develop mainly along the lines disinfectants, antipyretics, and supporting measures. Other agents may be needed to meet complications, but are generally unnecessary in the treatment of the primary disease; and we cannot afford to cumber the stomach with any unnecessary medication.

As a beginning, when indicated, I would suggest the administration of small doses of calomel and soda, half grain tablets, repeated at intervals of two hours until four or five doses have been given, to be followed, if necessary, by a small dose of castor oil.

Such a course may be repeated if not contra-indicated until the secretions shall have been properly aroused.

Calomel not only acts as an efficient disinfectant, but it stimulates the general secretory system, thus eliminating poisons, relieving engorgements and equalizing the circulation, and we are enabled to place the citadel of life, as it were, in the best possible state of defense.

I can conceive of no plan of treatment for typhoid fever, or any other fever as to that, by which we can expect average good results if we attempt to treat with the secretory organs left in a state of congestion. I am aware that some practitioners seem to have a holy horror of the use of calomel in typhoid fever; but after having cautiously used it for years, I can conscientiously say that I have not only never seen it do harm, but to the contrary have often seen it produce very happy results indeed. I would recommend the use of calomel in small doses when indicated throughout the entire course of the disease.

In every case of typhoid fever, as soon as a diagnosis is reached, and in the doubtful days of suspected but undeveloped cases, I would place the patient on a line of disinfectant treatment and assiduously maintain it. I deem it decidedly unwise to wait for the development of tympany, abdominal tenderness, and high temperature before commencing the use of disinfectants, since those troubles are sure to supervene to some extent in almost all cases, and I am sure that the early use of disinfectants will to considerable degree modify their severity, and thus favorably modify the course of the case.

Relative to the particular agent to be used permit me to give my unqualified preference to salol in five grain doses every four or five hours when not contra-indicated by disease of kidneys. If the kidney lesions or otherwise, salol be contra-indicated, we have acetozone, nitrate of silver, turpentine, iodine and carbolic acid mixture, naphthaline, thymol, ars. copper, listerine and a host of other similar agents from which we may select one suitable to each case.

In cases where diarrhoea is profuse and fails to yield to bismuth sub-nitrate, which by the way is an excellent disinfectant, I would suggest the administration of the zinc and codeine compound, composed of sulpho-carbolate of zinc, codeine and strychnia, a happy combination of disinfectant, soporific, and tonic, admirably adapted to meet the indications in cases characterized by excessive diarrhoea and the colicky pains often so very troublesome. Listerine and ecthol in equal parts constitute a safe disinfectant, giving splendid results especially with children. Turpentine is an admirable agent in cases characterized by a dry, brown tongue, cordes abdominal, distention and nervous prostration. Given in doses of five to eight or ten drops every four to six hours, it acts not only as an antiseptic of high order, but is also an excellent stimulant to the waning vital forces.

We now come to the consideration of antipyretics which constitute one of the most important features in the treatment of typhoid fever, and right here as a pointer in the direction of conservatism, let me impress the importance of not scaring at a moderate degree of fever. If we can succeed in holding the temperature between normal and 102.5 degrees without resorting to measures calculated to depress vitality, let us be assured that we are on the road to success, other indications being equally favorable; but let me urge the supreme importance of thus controlling temperature.

We must never lose sight of the fact that if we permit a persistent high range of fever during the first two weeks we may expect dis-

aster to overtake us during the long, weary vigils of the third and fourth weeks. Long continued high temperature will certainly exhaust vitality and thus invite the many disastrous complications that render the later stages of typhoid fever so extremely dangerous. From this we get the idea that the time to secure success is during the first two weeks but we must not let our grip slacken as the case progresses toward a favorable issue, since we sometimes meet disaster even in convalescence.

I have no patience with the idea of dallying with a high temperature until exhaustion renders heart failure imminent, and then rushing into heroics with strychnia, digitalis, glonoin, etc. Control fever and thus avoid exhaustion.

Relative to the agents to be used in controlling temperature without exhausting vitality, let me say that I am very favorably impressed with modern hydrotherapy. I am by no means an advocate of the Braud system in its entirety but am fully convinced that a modification of that system, in which we commence the bath in water at 85 or 90 degrees instead of 65 degrees, constitutes at once the most efficient, decided and safest method of controlling fever that we now have at our command. I would commence the bath by placing the patient in the supine position in a bathbox, provided with a suitable head rest to hold his head out of the water, which at the beginning of bath should have a temperature of 85 or 90 degrees, according to strength and temperament of patient. As soon as the patient is placed in the bath commence cold affusion to the head and maintain it as long as he remains in the water. After about five minutes commence the addition of cold water or ice to the bath removing the warm water from the box as it fills by the addition of cold water.

Continue this process, keeping the body well covered with water until the temperature of the bath is lowered to about 65 or 70 degrees, consuming usually from twenty to forty minutes time.

After completion of bath remove the gown or sheet worn by patient during the operation, and without drying the surface place him in bed between blankets with warmth to the extremities, cover him lightly, adding proper clothing after reaction.

Such a bath may ordinarily be repeated as often as every three hours if temperature in axilla reaches 102.5 degrees.

By this process we favor elimination of poisons as well as control fever without causing that loss of vitality so liable to follow the free use of the coal-tar derivatives and other depressing agents.

By persistent, systematic sponge-bathing in

connection with acetanilid, aconitine, gelsemium tinct., or some similar agents, we can usually succeed in holding the temperature below 102.5 degrees; but still such a course by no means gives the average good results that follow the full body bath.

Active intestinal hemorrhage, and menstruation contra-indicate the bath which is also not available in cases occurring with small children with whom we must depend upon the sponge bath and other measures indicated above.

Relative to the coal-tar derivatives, permit me to say that I deem it unsafe to depend on them as antipyretics in typhoid fever. Their long continued free use is liable to induce nervous prostration and dangerous heart weakness, thus inviting the many complications we so much dread; but, notwithstanding these untoward features the occasional administration of a dose of acetanilid or some of its many congeners, is safe, secures rest and often yields very pleasant results; but if we depend on such remedies in connection with quinine in the treatment of typhoid fever our patients will too often be left in a hole in the ground.

Last, but not least, let me urge the supreme importance of proper supporting measures. I would be unwilling to attempt to treat typhoid fever without strychnia, digitalis and nuclein solution. I commence their use early in the attack, not waiting for prostration to be developed, and maintain them throughout the case, depending largely on them for favorable results.

Let me in this connection insist that we look well to the nutrition of our patients. Give plenty of cold water and lemonade, and maintain strength by the administration of liquid and semi-liquid nutritious diet at short intervals and in such quantities as can be digested and assimilated. Look well to the condition of the nervous system, and secure a reasonable amount of refreshing sleep by the use of non-depressing soporifics when indicated.

With regard to complications I will speak only of intestinal hemorrhage, which doubtless can, to some degree be prevented by relieving tympany and restraining excessive diarrhoea, in which we have increased congestion and peristalsis. If hemorrhage, sufficient to demand treatment, should occur, I would suggest, first, if not contra-indicated, a full opiate to quiet peristalsis, to be followed by the administration of adrenalin solution 1 to 1,000, of which I would give 5 to 20 drops by mouth or hypodermically every 30 or 40 minutes or oftener in very urgent cases. In connection with these I would give large doses of the bismuth sub-nitrate and charcoal mixture, at intervals of two hours or oftener, turpentine, ergot in available form, lead acetate, nitrate of

silver, gallic acid, iced compresses over abdomen, maintaining all the while absolute quietude in the supine position, are all available agents; but far above all others I rely upon opium, adrenalin solution, bismuth and charcoal in connection with complete rest.

As a resume, I would give calomel for its effects when indicated. Early and persistent disinfection of gastro-intestinal tract. The use of safe and efficient antipyretics in connection with the early and continuous use of proper supporting measures.

Such, gentlemen, is my observation and experience, and as such this paper is respectfully submitted for criticism.

REQUIREMENTS FOR MEDICAL COLLEGES AND STUDENTS BY THE STATE BOARD OF HEALTH OF KENTUCKY.

REQUIREMENTS FOR MEDICAL COLLEGES AND STUDENTS.

On and after July 1st, 1905, every medical college shall comply with the following requirements as a condition of being recognized as reputable by the State Board of Health of Kentucky:

(1)—It shall uniformly exact the requirements for matriculation set forth in "requirements for Admission to Medical Colleges," adopted by this Board on this date.

(2)—It shall literally observe its own requirements for admission, tuition, time of attendance at the annual sessions and graduation, which must be definitely expressed.

(3)—It shall have adequate equipment and an active and competent faculty, for teaching the science and art of medicine, embracing the following departments, viz.: Anatomy, Physiology, Chemistry, Pathology, Histology, Bacteriology, Surgery, Obstetrics, Gynecology, Ophthalmology, Otology, Hygiene and State Medicine, Medical Jurisprudence, Physical Diagnosis, and Therapeutics and Practice, in accordance with the system to which the college belongs.

(4)—It shall have clinical and hospital facilities based upon a minimum municipal population at its place of location of not less than fifty thousand; provided, that this requirement shall not apply to institutions under State control, which, by virtue of such control receive patients gratuitously from all parts of such State.

(5)—It shall require actual attendance upon eighty per cent. of each of four courses of instruction of not less than thirty continuous weeks, excluding holidays, in four separate

years, and shall not hold more than one graduating course in any one year.*

(6)—It shall not accept notes in payment of fees, or offer or accept scholarships, or any reduction in fees, or any form of rebates, except as provided for or required under State laws or under the laws of endowed universities, and no student shall be given credit for attendance, or advanced, or graduated, until all fees have been paid.

(7)—Colleges may honor official credentials issued by medical colleges of equal requirements, as to students who have complied with the "Requirements for Admission to Medical Colleges," except in the branches of study embraced in the last year of their own curriculum

REQUIREMENTS FOR ADMISSION TO MEDICAL COLLEGES.

All colleges shall require every medical student applying for matriculation on and after July 1, 1904, to present to it "A Medical Student's Certificate," issued to him by a Certified Examiner of the State Board of Health or State Board of Medical Examiners of the State in which such college is located, approved by such board, and a certificate of good moral character.

The examiner shall require as a basis for his certificate:

(a) A degree of A. B. B. S., or equivalent, from an approved university, college or academy of arts, science or philosophy.

(b) A diploma or certificate of graduation from an approved high school or normal school.

(c) A State teacher's permanent or life certificate.

(d) A medical student's certificate from any State Board of Health or Examiners demanding equal requirements.

Or, an examination in writing in the following branches:

(a) English, submitting a composition in his own handwriting on some subject of general interest embracing not less than two hundred words, which shall be considered with reference to penmanship, spelling, pronunciation, thought and construction.

(b) United States History.

(c) Arithmetic, vulgar and decimal fractions, percentage and compound numbers.

(d) Algebra, through equations.

(e) Latin, through first year of ordinary course.

(f) Physics, the elements of mechanics, hydrostatics, hydraulics, heat, optics and acoustics.

GRANTING OF CONDITIONS.

Applicants failing to obtain a general av-

*It should be noted that no provision is made for giving advanced standing for A. B. S., or other degrees.

erage of 75 per cent. in the entrance examination and falling below 55 per cent. in but two branches may be conditioned by the Official Examiner, upon a different form of certificate. The Examiner shall make a separate list of such conditional applicants in duplicate, one copy of which shall be sent to the State Board of Health or Examiners, and the other retained in his office.

REMOVAL OF CONDITIONS.

Such conditions must be removed by the presentation of a certificate from the Examiner that such applicant has passed a satisfactory examination in the branches in which he was formerly found deficient, before he can receive credit for the first or be permitted to enter upon his second year of study, and the Examiner shall furnish a list of such applicants to the State Board of the jurisdiction.

FEE.

Two dollars is hereby fixed as the fee to be collected by the Examiner for each certificate in Kentucky. Those examined in special subjects to remove conditions will not be required to pay again, but those failing and taking a second examination will pay another fee.

By order of the Board,

J. M. MATHEWS, M. D., President,
J. N. McCORMACK, M. D., Sec'y.

RECTAL SEGMENT OF THE URETER.

Byron Robinson has dissected and examined a number of subjects, and from these examinations he concludes that in the male, the ureter is more intimately related to the rectum than in the female. The distal ends of the male uterine are imbedded in cellular tissue resting in direct contact with the rectum. The relation of the ureters to the rectum varies according to the resting or distended state of the rectum, vagina, and bladder. Distension of all of these, forces the peritoneum on the bladder a remarkable distance upward, permitting safe abdominal and bladder incisions, to inspect the, or to manipulate the distal peritoneal ureteral ends. In abdominal operations, when the peritoneum is opened the ureter may be recognized close to the rectum by manipulating the cellular tissue between the finger and thumb. In general the ureter and rectum are not parallel in the pelvis, the former following the curve of the lesser pelvic wall, while the latter follows the sacral curve.—*American Medicine*.

VALUE OF WATER IN DISEASE.

Attention is called to the importance of a plentiful administration of water, especially in those diseases accompanied by a rise in temperature, by E. Homberger (*Berl. klin. Woch.*, June 20, 1904.). For by this method the most distant cells may be reached and affected. Water is the great natural curative measure and the easy method of application should not cause it to be neglected. As cellular pathology demands a cellular therapy, this agent seems to be the most rational means to attain that end. In the presence of fever especially, the administration of water should be made a particular effort, as there is an insufficient quantity present in the system, and as the body is slow to give this up, a diminution in the quantity of sweat and urine results. The author claims that perspiration is only restored when the temperature begins to drop and the superfluous water is no longer needed. Where toxins have circulated in the blood for a considerable period, the giving of water is of great value, but where these products leave the system rapidly and unite with the cells, it can be of little avail.

DIAGNOSIS OF TYPHOID FEVER.

Rolly concludes from his observations that agglutination takes place with dead typhoid bacilli in the same dilutions as with living typhoid bouillon cultures; blood serum which does not agglutinate living bacilli, will not agglutinate dead typhoid bouillon in the same dilution. The agglutination of dead typhoid bouillon takes place a quarter to half an hour later than with living bacilli; this can be noted microscopically in two hours, none will appear. Macroscopically, the agglutination can be seen with twelve hours as the longest time, while microscopically it can be observed within from fifteen minutes to two hours after the addition of the serum. If no agglutination is noted microscopically in two hours, one will appear. The Widal reaction can thus be greatly simplified, since the bouillon containing dead typhoid bacilli can be preserved for a long time.

AETIOLOGY OF MALIGNANT NEOPLASMS.

Kelling has conducted a number of animal experiments with a view to ascertaining the origin of malignant growths. He comes to the conclusion that, in general, Cohnheim's theory is correct, viz.: that these neoplasms originate in foreign embryonal cells, cells, that is, which are foreign to the tissue in which they proliferate. In some instances, he found cells which did not belong to the species of animal in which they were found, but which were normal cells in other lower species.

NOTES ON VACCINE.

McClintock reports a number of experiments he has conducted upon various animals for the purpose of settling as far as possible certain disputed facts regarding vaccine. His conclusions, abbreviated, are: "(1) Many of the domestic animals are susceptible to small-pox vaccine. (2) The time of development varies notably, from three days in a guinea pig to from nine to eleven days in a dog. Vaccine grown for seventeen generations on guinea pig, where it develops in three or four days, when inoculated on heifers or dogs, takes the usual time for development in those animals. (3) In guinea pigs and rabbits, full grown animals are decidedly more susceptible than young ones. (4) Vaccinal immunization in cattle is not to any notable extent transmitted to the fœtus. (5) A great many chemicals have a destructive or germicidal action on bacteria, but in the list of chemicals thus far tried, none has been found which shows any special or specific action against the vaccine organism. (6) The vaccine organism is not killed by glycerine, chloroform, chloretone, potassium cyanide, carbolic acid, or quinine, when these chemicals are not used in too great strength. (7) Contrary to the opinion of many observers, we have not found that the vaccine organism decreases in virulence by repeated inoculation on calves."

INFLUENZA AND APPENDICITIS.

Marvel reaches the following conclusions: (1) Appendicitis has increased in the past five years much more rapidly than in either of the previous five year periods studied. (2) The accessory cavities are more frequently attacked, and when diseased, more likely to be aggravated by influenza, than by other diseases. (3) There is more than a possibility of the existence of chronic intestinal influenza, therefore, a probability of its causative relation to appendicitis.

QUININE IN HAY FEVER.

Fulton's treatment for hay fever consists of the employment of a saturated solution of quinine sulphate, in sterilized water, as a nasal spray, and the application to the mucous membrane of the nares of an ointment consisting of quinine and petrolatum in the proportion of 30 grains to the ounce, the application being made every four or six hours.

HAEMATOMATOUS MOLE.

Bauereisen records a case of this condition as first described by Breus. These moles are more accurately described as aneudysmal moles, for they present bloody sacs in the intervillous spaces in direct connection with the blood vessels, rather than collections of blood in the tissues. The uterine mucosa is the source of origin of moles, and in the case reported a curetting had previously been done for a hypertrophic glandular endometritis. Hæmatomatous moles are caused directly by the occlusion of the efferent vessels of the intervillous spaces through deportation of chorionic villi. An early hydramnios and an independent continuance of growth of the secundines after fœtal death, is a secondary cause of the condition.

PHOTO, RADIO, AND HIGH FREQUENCY THERAPY.

Allen concludes: (1) In the vast majority of cutaneous affections the Rontgen ray is of greater utility than either the actinic or high frequency methods. (2) In lupus the Finsen method, though tedious and disagreeable, is efficacious. The combined ray and high frequency spark may prove to be equally good. (3) The actinic method is less beneficial in cancer than the Rontgen ray. (4) The high frequency method is exact, no more disagreeable than the actinic, and for small lesions of epithelioma, lupus, lupus erythematosus, and many skin diseases gives quicker and better results. (5) All three can be advantageously combined for the different stages and phases of a large class of affections.

OVARIAN HAEMORRHAGES.

Buerger describes a case of a barren woman who was laparotomized for internal hæmorrhage. The left ovary was of the size of a hen's egg, and was perforated in one place through which blood had escaped into the peritonæum. The ovary was the seat of cystic degeneration. Careful microscopical examination disclosed the absence of any evidence of an extrauterine pregnancy; but it was found that a corpus luteum cyst was the seat of rupture and of almost fatal hæmorrhage. The author says that in the absence of a history of pregnancy when the symptom-complex of an internal hæmorrhage is present, the rupture, with hæmorrhage, of a corpus luteum cyst must be thought of.

IMPORTANT NOTICE.

The appended letter from Dr. Joseph D. Bryant, Chairman of the Committee on National Incorporation, is self-explanatory. Secretaries of county societies are requested to cut out the petition to the Judiciary Committee of the Senate and House, to have all the members of the county society subscribe their names to the petition and to return it to the secretary of the State Association not later than the first of November.

No. 32 West 48th Street,
New York, N. Y.

Dear Dr. McCormack:

I am again calling the attention of the members of the House of Delegates to the need of active effort on their part, in securing the weight of cooperative action of the members of the National Medical Association in gaining a national incorporation of the organization at Washington the coming winter. The following is the text of the now proposed charter of incorporation as just constructed by Judge Ray, who is still giving us the benefit of his long experience in such matters. (See report of Committee on National Incorporation, Jour. Amer. Med. Ass'n., June 11th, 1904.)

You will please to arrange it with your colleagues of the House of Delegates of your State, that the president and secretary of each county organization of the State receive promptly a copy of the enclosed petition along with an urgent request that the signature of the members of each county organization be promptly signed thereto and returned to you, (that you may know at once of compliance with your request,) for compiling and forwarding to me not later than November 1st, 1904, for presentation at Washington at the opening of the Congressional session. Many of the State organizations have already taken active steps in the matter in accordance with the spirit of the following resolution passed at the last meeting of the American Medical Association at Atlantic City:

Resolved, That the officers and the members of the House of Delegates of the American Medical Association now in session at Atlantic City, do hereby pledge their loyal support and earnest efforts in aid of securing national incorporation of the American Medical Association by a special Act of Congress."

Yours truly,

JOSEPH D. BRYANT, M. D.,
Chairman Committee National Incorporation.

P. S.—It seems entirely fitting to me that other reputable physicians who are not members of the Association be encouraged to aid

us in the matter by signing their names to the petition and otherwise giving a hand.

J. D. B.

HAEMORRHAGE DURING PARTURITION.

Ahlfeld draws his conclusions from the observation of 6,663 births. He says that the placenta will remain in the vagina from one hour and a half to two hours if it must not be expressed on account of bleeding, and it would remain there longer if it were not artificially removed. This then is the normal course of the third stage of labor. The loss of blood during birth is dependent upon the size of the child; the loss of 600 to 800 grammes is normal when the child weighs from seven to eight pounds. On the other hand, the period of expulsion or the rupture of the membranes in relation to the dilation of the cervix at the time, have no bearing upon the amount of bleeding. In pathological or abnormal births, the expulsion of the placenta is necessary, as a rule, on account of bleeding. Hæmorrhage of a moderate amount during labor has no effect upon the general condition of healthy women or upon their ability to nurse satisfactorily if they have good care.

CRYOSCOPY OF THE BLOOD.

Fueth concludes, from his experiments on rabbits, that the pregnant rabbit's blood is more capable of taking up CO₂ than that of the non-pregnant animal. The blood of a rabbit which has breathed pure oxygen for a considerable length of time, shows no change in its freezing point. He further found that the red cell count and the freezing point of blood were the same at the end as at the beginning of pregnancy. Fueth believes that at the end of pregnancy, the human fœtus has absorbed more oxygen than is absolutely necessary for its immediate purposes.

TRYPANOSOMA.

Guenther reports the case of a man thirty-three years of age who presented a chronic picture of irregular attacks of fever with loss of strength and diminished hæmoglobin. The patient suffered from temporary cedema of various parts of the body and a peculiar affection of the skin. The spleen and liver were enlarged, becoming larger during the acute attacks. There was a constant tachycardia with occasional dyspnoea and an abnormal irritability of the vascular system. The fever was always accompanied by the finding of the trypanosoma in the peripheral blood. There was a relative increase of uninclear leucocytes.

PETITION.

Gentlemen of the Judiciary Committee of the Senate and House of Representatives of the United States of America:

We, the undersigned, members of the medical profession throughout the United States, most respectfully request the speedy enactment of the following proposed bill incorporating the American Medical Association:

“Be it enacted by the Senate and House of Representatives in Congress Assembled:

Sec. 1. That Robert M. O'Reilly, M. D., Presley M. Rixey, M. D., Walter Wyman, M. D., E. H. Gregory, M. D., Henry O. Marcy, M. D., Nicholas Senn, M. D., George M. Sternberg, M. D., J. M. Matthews, M. D., W. W. Keen, M. D., C. A. L. Reed, M. D., J. A. Wyeth, M. D., Frank Billings, M. D., J. H. Musser, M. D., T. J. Happel, M. D., Miles F. Porter, M. D., E. E. Montgomery, M. D., W. W. Grant, M. D., H. L. E. Johnson, M. D., A. L. Wright, M. D., William H. Welch, M. D., M. L. Harris, M. D., and Philip Marvel, M. D., and their successors, are hereby made and constituted a body politic and corporate by the name American Medical Association, with perpetual succession and power to take, for the purposes of its incorporation, by devise, bequest, grant, gift, purchase or otherwise, and hold or convey both real and personal property, and transact business, anywhere within the United States.

Sec. 2. The object and purpose of such corporation shall be to promote the science and art of medicine throughout the United States.

Sec. 3. Such corporation shall have power to make by-laws, rules and regulations, and choose officers for its government and the attainment of its purposes.’’

The proposed charter declares the purpose of the Association. It is non-political, and has for its main object the promotion of medical science which can best be accomplished by unity of purpose and action. Such Association will bring together annually the best and most accomplished medical men of the Nation and prove, we believe, beneficial to all the citizens of our country.

RETINAL HEMORRHAGES IN SEVERE ANEMIA DUE TO BOTHRIOCEPHALUS.

A. S. Tchermolossoff finds such hemorrhages to be a constant phenomenon in the severe forms of anemia produced by *Bothriocephalus latus*. The form of hemorrhages is round, striped, or semicircular. They are usually located near the vessels about the posterior pole. Their course has an important influence on the prognosis. The bleeding takes place by diapedesis, the blood is reabsorbed entirely, and inflammatory phenomena are absent. The keenness of vision, and the other ocular functions are unaffected. These hemorrhages, occurring in the anemia of bothriocephalus, are identical with those of essential pernicious anemia, and offer an additional argument in favor of the identity of both anemias. The diagnosis of tapeworm anemia is facilitated by the general appearance, the absence of skin complications, and the lack of inflammatory symptoms on the retina.—*American Medicine*.

PANCREATIS CYST AND EXTIRPATION.

Andreoli considers occlusion of the duct most commonly the cause of cyst, but refers to more obscure reasons which may be causative. He believes calculus, as lithiasis elsewhere, is parasitic in origin. Difficult as diagnosis may be, once the laparotomy is done, a pancreatectomy is indicated; partial interference is not satisfactory, but when adhesions, or extensions of morbid processes, forbid, may be enforced; and mere tapping the cyst will be reserved to such cases as are absolutely inoperable.—*American Medicine*.

TREATMENT OF TRACHOMA WITH KNAPP'S ROLLER FORCEPS.

I. Hoppe gives Knapp's roller forceps the preference over all other treatments for trachoma, because of its rapid results, easy technique, and absence of danger. Neither assistant nor ether is necessary, and the patient can come to the physician's office. The instrument is to be used only in case follicles are to be expressed. It may be necessary to repeat this, and, in fact, should be repeated so long as new follicles develop.—*American Medicine*.

THE SIGNIFICANCE OF BLACK URINE.

A. E. Garrod names the following conditions in which urine is black, or becomes black on standing, may be excreted: (1) jaundice, especially when of long standing; (2) hematuria; (3) hemoglobinuria; (4) hematuria; (5) melanotic sarcoma; (6) alkaptonuria; (7) ochronosis; (8) when abundance of indican is present; (9) long-standing pulmonary tuberculosis; (10) after taking certain drugs and articles of diet; (11) certain rare cases of undetermined nature. These varieties are briefly considered in detail, partially as regards points of differentiation and partially from their diagnostic and prognostic significance. The prognosis varies greatly. Melanuria is of the gravest import as signifying the recurrence of melanotic growths in the viscera; an equal degree of blackness of the urine is reached in alkaptonuria, which, so far as known, is a quite harmless condition.—*American Medicine*.

TALLOW OR BEEF SUET.

R. Ortega relates how, by misunderstanding, a tuberculous patient took a quantity daily. His cough and general health improved. The author believes that tallow has a peculiar value in internal medicine, for the reason that it is a fat which adheres to mucous membranes. If heroin or codein, etc., cannot be employed, and no one may be entrusted with chloroform, or other inhalants, at the bedside, tallow by the mouth is a safe and effectual remedy in cough. There are intestinal disorders which benefit by its administration, which may be in cache.—*American Medicine*.

PARALYSIS OF THE RECURRENT LARYNGEAL NERVE IN MITRAL STENOSIS.

Alexander reports a case of intermittent hoarseness. In a roentgen ray photograph of the thorax he finds the transverse diameter of the heart increased; the picture fails to show a tumor of the mediastinum, aneurysm or enlarged mediastinal glands. Alexander believes the paralysis is due to the pressure of the dilated left auricle, conus arteriosus and pulmonary artery upon the recurrent laryngeal nerve.—*American Medicine*.

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Miss C. E. Abraham.....	1899—Gray Street Infirmary, Louisville.....	117 W. St. Catherine, Louisville.....	H 1283
Miss Mary A. Alexander.....	1891—Louisville City Hospital.....	603 W. Oak, Louisville.....	C 490
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LOUISVILLE, KY., NOVEMBER, 1904.

NO. 16

THE SURGICAL ASPECT OF BRIGHT'S DISEASE.*

By J. GARLAND SHERRELL, M. D., LOUISVILLE, KY.

The gloomy outlook for a patient suffering from any form of chronic Bright's Disease has a tendency to bring attention to anything proposed for its treatment which seems at all likely to be beneficial. It is only within the past ten years that any form of surgery has been considered in this connection. Decapsulation of the kidney was first done upon floating kidney which was chronically inflamed with a view to fixation, and some beneficial results following, the operation was undertaken with the avowed purpose of benefitting Bright's disease. There has been considerable discussion as to priority, but to Edebohls is generally given the credit of bringing the operation prominently before the profession.

A. H. Ferguson, of Chicago, before the American Medical Association at New Orleans claimed to antedate the first operation of Edebohls, but without clearly establishing his claims. However, it is not our purpose to decide this question, but rather to attempt to reach a decision as to the real value of the operation from a study of the literature so far published. I have been requested to prepare this paper, not because of my large experience in operations for this condition, but perhaps because your Committee believed that I would endeavor to present the subject in a fair and judicial manner. This I hope to do, although confessing that I have stood among the doubters.

It is somewhat difficult to understand how removal of the Kidney capsule can be of marked benefit to an organ affected by Bright's Disease, especially of the interstitial type. Yet we have other instances in surgery where marked benefit has followed surgical procedures in which the reason for improvement was not apparent, notably in Tubercular Ascites. For that very reason, I think we should not too hurriedly condemn an operation which so many gentlemen worthy of respect are claiming to be of benefit to these sufferers, nor should we make claims of its value that we may be forced to abandon after a time. There is undoubtedly some danger of the pendulum

swinging too far toward the side of all forms of operation at the present time, therefore, I think the physicians and surgeons of this Association have wisely refrained from urging this operation until its value is more clearly determined.

You have just heard a scholarly essay upon the medical aspects of Bright's Disease and the picture is certainly not one of which the profession can be very proud. There are many things yet to be learned about these diverse conditions of the kidneys to which Bright has given his name. Are we yet sufficiently familiar with their etiology to lay down any hard, any fast rules concerning the different forms? Are we dealing with a local process entirely, or merely the local changes resulting from the general disease, or from efforts at elimination to toxic principles ingested or produced in the system? It is an undoubted fact that in arterio-capillary fibrosis marked changes occur in the kidneys as well as in the entire vascular system. Delafield (quoted in Musser's Diagnosis, Page 975), has well outlined the course of chronic diffuse nephritis with exudation (Chronic tubular nephritis.)

1. "The symptoms may be continuous and progressive in severity, death taking place at the end of one or two years, on account of dropsy or uraemia. 2. The symptoms may continue for several months and the patient finally improve, recurrent attacks take place, the symptoms being more severe with each attack. In the intervals of the attacks there is a small amount of albumen in the urine. 3. The patient may apparently recover, but the urine continues to be of low specific gravity and contains some albumen. A fatal attack of uraemia or an apoplexy or an acute disease may cause an exacerbation of the renal symptoms. 4. The symptoms may persist in a milder degree, the patient at the same time feeling comparatively well."

Osler says (page 882), "Chronic Bright's Disease is an incurable affection, and the anatomical condition on which it depends is quite as much beyond the reach of medicines as wrinkled skin or gray hair. Interstitial nephritis is compatible with the enjoyment of life for many years, and it is now universally recognized that increased tension, thickening of the arterial walls and polyuria with a small quantity of albumen neither doom a man to death within a short time, nor necessarily interfere with the pursuits of an active life so

* Read before Kentucky Medical Association, Lexington, Ky., May, 1904.

long as proper care be taken. I know patients who have had high tension and a little albumen in the urine with hyaline casts for ten, twelve or one instance fifteen years." The symptoms of chronic interstitial nephritis are as we all know very vague, and the condition may last through life, the patient dying of other causes.

These very facts render the claim of recovery after operation at least open to doubt. With these facts in our minds let us consider the results that are claimed for the operation. Edebohls (Medical records, March 28, 1903), reports 51 patients upon whom he had performed decapsulation up to December 1902. Of these 29 were females and 22 were males. With the exception of a girl four and one-half years, all were adults, the average age was 34 years. Of 32 cases operated on in 1902 all were far advanced in Bright's Disease, the clinical history, physical examination of the patient, and the chemical and microscopical examination of the urine left no room for doubt as to the diagnosis. Nearly all of these 32 were complicated in greater or less degree. The appearance of the kidneys at operation he claims, confirmed the diagnosis giving the characteristic appearance to sight and touch, and occasionally microscopic examination of minute portions of the organ also corroborated the diagnosis. Of the 51 cases, 29 had chronic interstitial nephritis, fourteen had chronic diffuse nephritis, and eight chronic parenchymatous nephritis. In all of the latter two varieties, both kidneys were affected not always to the same degree; of 29 cases of chronic interstitial disease, 9 cases affected only one kidney. This statement is at variance with almost all the writers upon Bright's Disease and certainly needs further proof than simply sight and touch.

For instance, Guiteras says, that he had the autopsy records of 500 cases dying from chronic Bright's Disease looked over, and in only one case found a purely unilateral affection.

Kummel and Strauss found both kidneys affected in the cases of Bright's Disease examined by uteral catheterization. Heretofore, pathologists universally acknowledged this to be a fact. It is very difficult to understand how a true Bright's can be other than bilateral, for in unilateral disease we must look for a local cause rather than a constitutional one, and in such a case the removal of the local cause or the diseased kidney itself should cure the condition, which in our present knowledge of Bright's disease would probably be a fatal procedure.

Therefore, we may safely conclude that in nine cases at least, there is some doubt about Edebohls' diagnosis. He attempts in his article to explain this finding by the claim that pa-

tients do not die when only one kidney is affected with Bright's Disease, and as the disease must have a beginning, it attacks one kidney before the other. We can readily understand that both kidneys are not equally resistant to disease and that repeated congestions, from exposure to cold, from infections, (scarlatina, etc.,) or from the elimination of tissue waste might affect one kidney a short time prior to the other, yet the second kidney will most probably be diseased for some time before the symptoms of Bright's are noticed. While it is possible for one kidney to be attacked before the other, it certainly must be very rare that such condition obtains for any great length of time. The reason for this lies in the fact that both kidneys must eliminate the toxic and irritant products from the blood, and each is equally exposed. Moreover, the heart and blood vessels are alike subject to the action of the same irritants as the kidney. Of Edebohls' 51 cases, 7 died within seventeen days after operation, 7 died at periods after operation varying between two months and a year, average time of life being one year and eight months. Two patients do not show satisfactory improvement in every respect. Twenty-two are in various stages of satisfactory improvement, but have not passed a period of six months of normal urine. One patient after a cure extending over a period of four years, again has chronic Bright's disease, only one of her kidneys was operated upon. Nine patients were cured of chronic Bright's Disease and remained cured at periods after operation varying from one year and nine months to ten years, the average being over four years. Three patients disappeared from observation. He claims a cure in these nine cases upon the disappearance from the urine of casts and albumen, which while a most valuable evidence cannot be accepted as positive proof of a cure, since the usual history of Bright's Disease is to show periods of quiescence during which time albumen may be absent and casts found only after repeated examinations. The return of the disease in one of his cases four years after apparent cure, renders the permanency of the cure in the nine cases doubtful.

If additional time prove these cases cured, and the original diagnosis be accepted, we will be forced to acknowledge the benefit of the operation as a curative agent. In looking at his table, however, we find that of the nine cures, in five there is no record of the time Bright's Disease had been recognized, while in the other four cases, one year and six months was the longest time the condition had been known to exist. Can we be positive, then, that in these cases, he was not dealing with an acute form of Nephritis, which as we know of-

ten progresses to a recovery? To say the least there is room for some doubt even here.

With reference to the cases reported by other operators, the time that has elapsed is so short and the details so meagre that they add little to Edebohls' report. A. H. Ferguson reported to the last meeting of the American Medical Association 17 cases with one death and 16 cures, a record which is to say the least surprisingly good. The chief indication for operation in these cases seems to have been pain, a symptom which has usually been considered absent in chronic Bright's Disease.

Eight cases were floating or movable kidney and the decapsulation was unilateral in all his cases save two. The microscopical finding in eight cases showed nephritis, four interstitial, two parenchymatous, and two parenchymatous and interstitial changes. In two other cases the microscope showed normal kidney structure. Calculi were found in one case with parenchymatous nephritis and might be considered the causative factor. If, therefore, these three cases are excluded, we have fourteen cases to consider of which one had gall stones, one chronic cholecystitis, two appendicitis, and two disease of uterus and adnexa as complications. Doubtless many of you have found cases of appendicitis, cholecystitis and other inflammatory conditions which were accompanied by albumen and casts in the urine which conditions disappeared after the inflammation subsided, or after the organ exciting it had been removed. Could not this have occurred in some of Ferguson's complicated cases? Even granting this, we are compelled to admit that some of his cases must have been Bright's Disease, and were apparently benefited by the operation. He either dealt with a local condition causing a unilateral nephritis, or we must consider that unilateral decapsulation offers more benefit to these patients than does operation on both kidneys. A very interesting report is that of Dr. L. L. McArthur (Transactions of section of Surgery and Anatomy, Am. Med. Association, 1903, p 72.) of a patient in whom he made separate collections of the urine from each kidney three times for three successive weeks. He then removed the capsule of one kidney to determine whether that kidney would be benefitted or not. The urine from the operated kidney was very much increased in quantity and improved in quality, the physical condition of the patient was also much improved, the oedema having disappeared. Three months later the patient returned to have the other kidney decapsulated, as a result of this operation the urine from this kidney also showed improvement. These with other reports seem to justify this operation in certain well selected cases. Only a large series of cases in the hands of differ-

ent surgeons can determine when operation is clearly indicated and what are the contraindications.

Edward Reynolds in the Boston Medical and Surgical Journal, Feb. 4, 1904, says the cases in which general uraemic symptoms are more prominent than the physical signs obtained on examination of the urine, are unpromising cases for operation. Where the urinary signs and constitutional depression outweigh the distinctly uraemic general symptoms, we may regard the cases as favorable for operation. Also that where one kidney is mainly, or predominantly affected, an unilateral operation upon that kidney offers an excellent chance of prolonged improvement in health, if not indeed ultimate cure.

Reginald Harrison in 1896 reported the disappearance of colicky pains, haematuria, and albuminuria in several cases upon whom he had exposed the kidney expecting to find a calculus or pus. He considered increased renal tension as causative of these symptoms, and advocated either puncture or nephrotomy for the following conditions: (1) Suppression of urine with alarming symptoms, as in scarlatinal nephritis. (2) Progressive signs of kidney degeneration as shown by the persistence or increase of albumen. (3) Where a marked disturbance of the heart and circulatory apparatus arises in the course of inflammatory renal disorders.

J. Israel in cutting down on the kidney in cases of suspected stone or new growth, found instead, various inflammatory processes involving isolated portions of the organ, or again the entire organ as a diffuse or parenchymatous nephritis. Harrison, Israel and Pousson all attribute the relief in their cases to decrease of intrarenal tension after cortical incision.

Edebohls attributes the relief in his case to the formation of numerous large blood vessels in the bands of adhesion between the kidney and adjacent tissues. He claims to have reached this conclusion after three operations done upon kidneys after a previous nephropexy. The vessels were so large as to require ligation in the separation of the adhesions and the arteries were more numerous than the veins. He also states that the arterial blood stream was toward the kidney. He, therefore, concludes that arterial hyperaemization is the basic factor underlying the changes which resulted in a cure, or an improvement after operation, and quotes Ziegler in support of this contention as follows: "When a portion of the renal epithelium has been destroyed by a morbid process which spares the interstitial structure, the loss is in general soon made good by a regenerative proliferation of the remainder; and if the circulation is adequately

maintained, the new epithelium presently becomes capable of carrying on the secretory functions." Schmitt (Record, Sept. 13, 1902), says, "If I might express an opinion the success is principally to be attributed to the local bleeding and relief of tension after incising the capsule proper. These two agencies cooperate in easing the intrarenal circulation and urinary flow, and may most effectively be brought into action by renal cleavage, though the subsequent cicatrization is bound to deprive the kidney of its functioning tissue."

H. A. Johnson, of California, (Annals of Surg. V. 37, p 592) reports experimental decapsulation of the kidneys of fifteen dogs with a view to determine the effects of this procedure upon the renal vascular supply, and found in ten dogs which survived the operation that there was no evidence of an increase in the circulation as a result, or any anastomosis between the renal or perirenal vessels.

Ferguson claims that these experiments are defective, in that the kidneys were normal hence did not need new blood supply. However, in one of his experiments Johnson tied the renal artery of one kidney before decapsulating the other, yet without the formation of an anastomosis between the renal and perirenal vessels.

More recently Edebohls in a discussion of this subject states that in serial sections from a kidney removed post-mortem four months after operation, "enormously dilated and enlarged blood vessels were shown which penetrated from the fatty capsule through the capsule proper into the kidney substance." (Record, Sept. 19, 1903). Dr. Emil Reis in a discussion of this subject before the Chicago Surgical Society says, that he had 600 sections taken from a kidney removed sometime after decapsulation without a single anastomosis directly with the kidney tissues. The only anastomosis seen was in the scar tissue where he had invaded the kidney pevis. (Annals of Surg. V. page 627.

Schmitt clearly shows the fallacy of Edebohls claim that by sight and touch the presence or absence of disease in the kidney can be determined, except perhaps where marked contraction is present. Schmitt tersely expresses his view upon the question of a cure of Bright's Disease and says: "If we take into consideration only such cases where the urine analysis, in conjunction with clinical symptoms, has established the diagnosis beyond doubt and if we eliminate those two recently operated as to admit of a conclusive opinion, we may safely assert that a number of symptoms have been relieved, but that chronic Bright's Disease has not been cured by operation, which at best represents only a symptomatic, but never a curative measure."

In the light of some of the cases reported, it appears that Schmitt's statement is not supported by fact, but granting it to be true, is not the operation justifiable even for temporary benefit in cases where carefully conducted medicinal treatment has failed?

It appears to the writer, that weighing the evidence very carefully we may conclude that a limited number of patients have been benefited by the operation and perhaps a few cases have been cured. We learn also that the immediate mortality is not insignificant even in the hands of the most skilled operators, although Edebohls claims that bilateral renal decapsulation could be performed by an expert in renal surgery upon 100 perfectly healthy human beings without the necessity of losing a single life. He also says, that the mortality attending renal decapsulation for chronic Bright's Disease will therefore prove to the mortality of the disease and its attendant complications, rather than that of the operative procedure undertaken for its relief. Yet he also claims, that one hour should be regarded as the limit of time allowed for the decapsulation of both kidneys. This is a tacit admission of danger, and if this operation comes into general use, many lives will probably be lost from a lack of dexterity upon the part of the operator. He also overlooks the fact that the trauma involves an additional tax upon already diseased kidneys. It will prove difficult in a given case to determine whether the expected benefit will equal the additional risk to the patient, therefore, it seems wise to let the patient decide for or against the operation without the surgeon's favoring it too strongly. The operation seems to offer most in chronic interstitial nephritis, which may exist for years under proper diet and exercise without a fatal result.

The exact value of the operation is for this very reason not clear. No data are obtainable upon which to base an opinion as to the best time to operate upon these patients. It would appear that other things being equal, the best results could be obtained before marked circulatory changes had occurred, or other serious complications had developed. A careful study of the case should be made so that an acute Bright's from which the patient is recovering be not subjected to unnecessary surgery. Some cases of anuria in acute nephritis where other measures fail, might be subjected to this operation with benefit, as might similar conditions during the course of a chronic Bright's Disease. If we grant that a nephritis of one kidney exists, an operation might relieve the tension sufficiently long to allow the restoration of function until the original cause is removed and the cure of the patient perfected.

At present an unilateral movable kidney

with evidences of chronic nephritis can be considered an indication for operation. A slight degree of cardiac hypertrophy is an accompaniment of every case of chronic Bright's Disease, but should usually not be considered as a contra-indication unless it is accomplished by widespread vascular disturbance and failure of compensation which preclude the patient's recovery, even though the kidney function be restored. Other complications, directly or indirectly connected with the kidney lesion will add to the risk of the operation, and are contraindications to its performance.

Guiteras in a study of 120 cases shows sixteen per cent. cured, forty per cent. improved, eleven per cent. unimproved, thirty-three per cent. deaths. He gives the mortality in chronic interstitial nephritis as twenty-six per cent., chronic parenchymatous twenty-five per cent., and in chronic diffuse seventy-five per cent. He also says, that death may result from exhaustion, uraemic coma, oedema of the lungs, acute dilation of the heart, asthenia, apoplexy, exacerbations of chronic nephritis occurring after operation as a result of cold and exposure, collapse, general purpuric extravasation, and myocardial thrombus.

Conclusions, (1) The operation has probably some merit. (2) That albumen and cylindroids in the urine do not always indicate that the patient has Bright's Disease. (3) The good effects of the operation are in the greater number of cases of short duration. (4) In some cases the good effects are sufficient to counterbalance the added risk to life, hence the operation is justifiable in a few selected cases. (5) The best results have been obtained in cases of nephritis where a single movable kidney was subjected to operation. Next to these cases operation upon chronic interstitial Bright's shows the best chronic diffuse nephritis the least favorable results. (6) The exact method by which benefit is produced is not apparent. the most plausible theory is, that the local bleeding relieves the vascular tension thus restoring the secretory function in a manner not unlike that obtained by the application of cups or heat to the loin. (7) That the operation may be performed where a fair trial of medicinal means has been made and the disease is still progressing unfavorably, also in certain forms of anuria. (8) The contraindications to operation are, valvular disease of the heart, failure of compensation without, but more especially with general anasarca, marked changes in the retina, and the presence of complications which are likely to result fatally in a short time, even if the kidney disease is relieved. (9) The anesthetic may be ether, chloroform, or spinal cocaine as all the operators claim that decapsulation seems to eliminate any bad effect ether

may have upon the kidneys.

The operation is described by Edenbohls as follows: "The patient is placed prone upon the table, with the authors (Edebohls) kidney air cushion underlying and supporting the abdomen. Both kidneys are thus rendered accessible to operation without the necessity of changing the patient's position. An incision is carried from the twelfth rib to the crest of the ilium along the outer margin of the erector spinae, without opening the sheath of that muscle. The fibres of the latissimusdors; muscle are bluntly separated in the direction of their course without cutting. The iliohypogastric nerve is sought for and drawn to one side or other, out of the way of harm. Division of the transversalis fascia exposes the perirenal fat. This is divided over the convexity of the kidney until the capsule proper is reached. The fatty capsule is now bluntly separated everywhere from the capsule proper, the dissection advancing on either aspect and around both poles of the kidney until the pelvis of the kidney is reached. Now and then the fatty capsule may be found so thickened and adherent, as the result of chronic perinephritis, that the scissors or knife may be required to separate it from the capsule proper. The kidney with its capsule proper, is next lifted from its fatty capsule bed, and, if possible, delivered through the wound. The capsule proper is divided on a director along the entire length of the convex external border of the kidney and clean around the extremity of either pole. Each half of the capsule proper is in turn stripped from the kidney and reflected toward the pelvis until the entire surface of the kidney lies raw and denuded before the operator. In separating the capsule proper from the kidney, care must be exercised not to break or tear away parts of the kidney, which is often both very friable and very firmly connected with its capsule proper. The stripped off capsule proper is next cut away entirely close to its junction with the pelvis of the kidney and removed. Delivery of the kidney makes this otherwise difficult work easy. If the kidney cannot be delivered, the capsule proper must be entirely peeled off the kidney by the fingers in the bottom of the wound, and excised as far as possible, any remaining portion being simply reflected backward around the root of the kidney, where it will curl up and stay. The kidney is dropped back into its fatty bed and the external incision is closed. Drainage, except when the parts are extremely oedematous, is dispensed with. After both kidneys have been operated upon, the dressings are applied and the patient is put to bed.

The safe performance of decapsulation of both kidneys at one sitting presupposes famil-

ilarity with kidney operations and consequently one either too slow or too hesitant and timid, is not the right man in the right place in operating for chronic Bright's Disease."

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DISCUSSION.

Dr. William Bailey, Louisville: I feel that this is a rather difficult subject to discuss.

As to the subject of chronic Bright's disease, and its prognosis, I will say that it is my belief that chronic Bright's disease, of whatever variety it may be, is absolutely incurable.

I believe, however, that many cases can be relieved.

The function of the kidneys is the elimination of the impurities of the blood. Now, the kidney may not do its work absolutely, and yet the man may be practically a healthy man. We often find cases where an examination shows the kidney to be diseased, and the patient entirely ignorant of the fact.

Now as to the diagnosis: when we are consid-

ering the symptoms, and find tube casts, that does not make a diagnosis. Certainly, when we get certain forms of casts, I believe that the diagnosis is made practically absolute.

It is the persistence of the presence of these casts under the microscope, and of albumen, to which we must look in making our diagnosis, and the absence of casts in one examination would not exclude Bright's disease.

The prognosis is very unfavorable. We do have, however, in my judgment, control of a very great degree of time during which a man may live. The reason is that these being organs of elimination, when one organ fails, the other begins to work vigorously.

In the consideration of this prognosis, we ought to take into account the other method of elimination, as well; that is, the skin, and I will say that I do not believe a man should expose himself too much to a cold raw climate, and he should wear proper clothing. As to exercise, this should be of such a character as not to unduly tax the kidneys, and, of course, proper food is of great importance. By this method of living, I think the prognosis may be greatly improved.

In order to have the best prognosis, it is not necessary for us to consider an absolute cure. Do you think a sclerotic kidney can be cured? Do you think that if a man has trouble with his kidneys that he ought to interfere with the action of the skin, which will assist in the elimination?

Now as to the surgical treatment, I take off my hat every day to the surgeon, when I see what he is accomplishing with this disease which has given the doctors so much trouble. A long while ago I thought I had a large field as a general practitioner, and was inclined to put the surgeon over in the corner, but the surgeon is doing good work and increasing his field.

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Dr. W. H. Wathen, Louisville: I can say nothing especially about the medical part of this subject further than to state that there is often a mistaken diagnosis of Bright's disease.

We may note the fact that when the urine is examined and there are hyaline cases with a trace of albumen, a diagnosis of chronic Bright's disease is made. Now, if we will make subsequent examinations of the urine passed at different times, we will not infrequently find no albumen and no casts.

Bright's disease, then, is not necessary for the formation of these casts, and certainly not to cause albumen in the urine, but when we have with these conditions granular hyaline casts, we usually have chronic Bright's disease.

One of my patients was recently examined by the distinguished Dr. Janeway, of New York. A few ounces of urine were passed after the patient entered the doctor's office, and an immediate chemic microscopic examination showed albumen

and granular hyaline casts, indicating chronic nephritis.

The doctor stated that the patient had albumen in the urine and granular hyaline casts, hypertrophy of the heart, chronic Bright's disease with well marked arterio-sclerosis. This man's urine has been repeatedly examined by an expert, since that time, the urine being saved for twenty-four hours; no albumen being found, and no casts, and the specific gravity instead of being 1112, as reported, was 1118.

I had the pleasure of witnessing the first work in surgery of the kidney done by Edebohls. I have often performed partial decapsulation in movable kidney, where I denuded the organ over a space one inch transversely and three inches longitudinally, and then sutured the capsule and the kidney in the wound. I have also performed the operation of splitting the kidney, with good results. What the results may finally be, I do not know, but there is nothing in the histologic, anatomic or pathologic indications, that justify us in the conclusion that these operations will stand the test of time. The arteries of the kidney are from the renal and are terminal, and only a few very small vessels enter the fibrous capsule, and no arteries enter this capsule or kidney from the fatty capsule. Hence the denuded kidney can get no blood supply from surrounding structures by any sort of direct blood connection, and the new fibrous capsule that will form around the decapsulated kidney will be more unyielding than the original, and will cause greater contraction, and prevent any possible permanent relief.

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Dr. J. G. Cecil, Louisville: I have had some help from the surgeons in the treatment of nephritis.

In regard to the prognosis of Bright's disease, I believe that there is a great deal that may be hoped for in the management, in the hygiene, rather than in medicine. There is a great deal that makes us believe that a man may live long, and live usefully, notwithstanding he has diseased kidneys. There is vicarious elimination through other channels, which justifies this conclusion.

A great deal depends upon the early management, and treatment. We should handle the case, so as to give the kidneys rest, just as we would treat an inflamed organ elsewhere, and I am satisfied that a great deal can be done.

I am delighted at the papers read, but am disappointed that the latter does not seem to be more enthusiastic upon the subject of the surgery of Bright's disease.

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Dr. W. F. Boggess, Louisville: I have enjoyed the two papers. I agree with Dr. Bailey and Dr. Cecil in what they have said.

Until recently there has been a very poor understanding of the etiology of Bright's disease.

The tubules, the interstitial tissues, and the blood vessels receive the brunt of the disease.

We usually draw the name from the part which is affected the most. In Bright's disease, all the tissues of the kidney are affected to some extent, and in every case of Bright's disease not every part of the kidney is involved alike. I care not how advanced the case may be, not all the kidney is involved alike. I have been impressed with the frequency with which we find what seems to be patches of normal tissues in the kidneys in all forms of Bright's disease.

In the treatment, we should endeavor to preserve such portions of the tissues of kidneys as are not already involved, sustain the integrity of the blood and prevent fresh exacerbation by proper attention to diet, modes of living, etc.

As to the surgical aspect of the case, I cannot say very much. I have read Ederbohl's and Ferguson's statistics, and I cannot see any good that they have accomplished in any case. We internal medical men control our cases better than they can be controlled by surgical procedure.

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Dr. Irvin Abell, Louisville: It seems to me that the conclusion is inevitable that we sometimes have other symptoms which we recognize as those of nephritis, which produce urinary symptoms which can be relieved by a decapsulation of the kidney, and even after these symptoms have persisted for some time, we can get good results.

Where there is an organic change in the kidney itself, however, I do not believe that decapsulation is a curative process.

I believe that any relief to the patient could have been accomplished just as well by medical means as by this surgical measure.

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Dr. Garrett, Frankfort: I would like to ask Dr. Sherrill to state his opinion as to the increased risk in giving anesthetics in these cases. If there are any increased dangers, I would be glad to have him explain them.

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Dr. B. L. Bruner, Louisville: There is just one point that is not entirely clear to me. We would, of course, all hail with delight, anything promising relief in these conditions. I cannot see, however, how an interstitial tissue involvement can be benefited by this surgical procedure. How can this operation affect the interstitial tissue?

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Dr. T. J. Shoemaker, Morganfield: I am highly pleased with the remarks of some of the doctors. They talk just like a book on the subject. They seem to take it for granted that we country doctors know just when we find albumen and when we do not.

I have known some men to be widely mistaken about albumen; they examine the urine and say

there is albumen in it, when there is none there.

Another thing, I believe that we can get at the real facts only after repeated tests of urine passed on different days, and I consider the first urine passed in the morning the best.

* * * * *

Dr. James B. Bullitt, Louisville: I wish to say in regard to the examination of the first morning specimen of the urine, that, while this is a common practice, it is not a proper practice. It has been conclusively shown that many patients have no trace, or only the slightest trace of albumen in the morning, but an examination of their urine after they have had more or less physical exercise will show far different results; therefore, instead of examining the early morning urine, you should have your patient bring a specimen passed late in the morning, or in the afternoon.

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Dr. J. G. Sherrill, Louisville: One point I would like to bring out in connection with the subject is that often we have local disease of only one kidney and find tube casts and other evidences in the urine of disease on that side.

I believe it would be a good plan to examine the urine of each side. The capsule and the fibrous tissue are involved, especially in the sclerotic form of Bright's disease. This is due to an elimination of the toxins from the blood, and often intravascular tension is increased, yet there are many kidneys subject to Bright's disease where there is no strain or tension on the capsule.

Chloroform and ether are dangerous where the kidney is largely involved and recently I refused to operate upon a case because of this fact.

ECTOPIC GESTATION WITH REPORT OF A CASE.*

By J. M. SALMON, M. D., ASHLAND, KY.

Ectopic gestation or extra-uterine pregnancy may be defined as the condition which arises from the arrest and development of the fertilized ovum at any point in its normal passage from the Graafian follicle to the uterine cavity.

Prior to 1883, the date of Taft's first operation for ruptured tubal pregnancy, interest in this condition was largely pathological, and, while much was written on the subject, little was really known until the advent of modern abdominal surgery and modern methods of diagnosis.

Until quite recently, too, ectopic gestation was considered to be an extremely rare condition, and on this point the statistics of the older writers are interesting when compared with those of to-day. Thus in 1876 Hennig stated that ectopic gestation was "so rare that

* Read at the meeting of the Kentucky State Medical Association, Lexington, Ky., May 18 20, 1904.

directors of large obstetrical clinics might never see a case." Winkel saw only sixteen cases in 222,000 births; Band, three cases in 60,000, and Ahlfeld only one case in twelve years active and extensive hospital practice. In 1876, Parry could collect only 500 cases to that date. But in 1892 Schrenck collected 610 cases reported in the five years preceding his publication.

Joseph Price estimated the proportion of extra uterine pregnancies at one in a thousand, Parvin's estimate was one in five hundred. It may be stated that nearly every surgeon of any considerable experience has operated on one or more cases, and the general practitioner, if he will examine his patients, will sooner or later meet with the condition under consideration.

This apparent increase of frequency is doubtless due to the development and perfection of modern surgical technique. That it is also due in great measure to the increasing prevalence of catarrhal inflammation of the generative organs, as a result of infectious processes, unhygienic surroundings and nervous disturbances, is believed by many thoughtful and experienced physicians.

Broadly stated the cause of *ectopic* gestation may be anything that interferes with the normal passage of the fecundated ovum through the Fallopian tube. This obstruction may be due to (a) obstacles in the tube, e. g. polypi; (b) to diseased conditions of the tube wall (tubal pregnancy occurs repeatedly in women suffering from gonorrhoea and catarrhal troubles); (c) to abnormalities of the tube, e. g. diverticula; foetal twisting or excessive convulsion; atresia, with external migration of the ovum from the other tube; and finally (d) pressure from peritoneal adhesions or adjacent tumors.

J. Whitridge Williams, who has written a most exhaustive review of the literature, concludes that "The aetiology of extra-uterine pregnancy is not a simple matter, and there is no universal cause for all cases. Careful study of the specimen and of the patient's history will give us a satisfactory explanation for its occurrence in the majority of cases, but in a small number we cannot account for the production of the affection, and its cause will remain as great a problem to us as to our predecessors."

The *site* of the gestation cyst may be ovarian or tubal.

Ovarian pregnancy was first described early in the seventeenth century and a number of cases have since been reported. But in the records of the past hundred years Williams found only four cases which, when subjected to the test of modern criteria, seemed to be positively ovarian pregnancies.

The usual location is the tubes and here the pregnancy may be ampullar, isthmic or interstitial according to the portion of the tube occupied.

Further sub-division is sometimes made into tubo-ovarian, tubo-abdominal, tubo-uterine and cornual.

In ectopic gestation decidual membranes are formed in the womb and in the tube. The placenta in the tube is attached to the tube-wall and does not differ materially in structure from the uterine placenta. The blood vessels of both tube and uterus are enlarged and there is progressive hypertrophy of the muscularis, the uterus being about one third as large as it should be for a normal uterine pregnancy of equal term. Free development of connective tissue in the tube follows, particularly after minute hemorrhages into the tube-wall. Pressure atrophy of the tube-wall usually takes place opposite the placental attachment.

The terminations of the tubal pregnancy are best given by Kelly as follows:

(1). Development of the fetus in the tube with false labor and death of the fetus, which is retained as a lithopaedion, is mummified or discharged with suppuraton.

(2). Tubal Mole.

(3). Tubal abortion (75 per cent. Martin-Orth).

(4). Extension into the uterus (interstitial form), and development to term.

(5). Rupture within the folds of the broad ligament with death of the fetus or advancement to term.

(6). Rupture into the peritoneal cavity with (a) continued growth of fetus, (b) death of fetus and mother, (c) death of fetus alone, (d) death of fetus with hemorrhages resulting in (1) suppuration, peritonitis and maternal death, (2) suppuration and discharge externally by rectum, vagina, bladder, or abdominal walls."

The early diagnosis of ectopic gestation in unruptured cases is exceedingly difficult and is not often made. Suggestive signs are a history of sterility, cessation of menses, subjective signs of pregnancy, unusual ovarian pains, enlarged uterus, and a small tender tumor at one side of, or behind the uterus. Later there may be expulsion of decidua from the womb and repeated attacks of sharp pelvic pain.

It must be remembered in this connection that the menses persist in 43 per cent. of the cases and that these patients have usually had menstrual disturbances and ovarian pains for a considerable length of time. The tendency therefore is to disregard these premonitory signs. Rupture of the gestation cyst is announced by striking and urgent symptoms. The patient may be standing, walking or ly-

ing down when she is seized with a sudden violent pain in the abdomen, and may immediately fall unconscious to the floor. Collapse and the signs of internal hemorrhage develop and without help death may speedily ensue.

Vaginal examination may reveal nothing more than an enlarged womb and slight hemorrhoea from the cervix. Or, there may be signs of haematocle, particularly if rupture has taken place within the folds of the broad ligament.

The mortality of extra-uterine pregnancy without operation is said by Schauta to be 68.8 per cent. reckoned on a basis of 241 cases. Veit gives the mortality in cases in which haematocle has formed at 25 to 28 per cent. With operation the mortality should not exceed 5 or 6 per cent. (Kelly).

The treatment of unruptured cases may be given in the words of Tait: "If ever I should make a diagnosis of tubal pregnancy before rupture I should advise its immediate removal by abdominal section."

In ruptured cases with formation of haematocle and no active hemorrhage, the treatment recommended by most operators is posterior vaginal incision, evacuation of clots and gauze drainage. But preparation should be made for abdominal section which may be necessary to stop hemorrhage.

The treatment during the latter months of pregnancy depends upon the condition found on opening the abdomen. The danger of secondary rupture constitutes the chief indication for laparotomy. Waiting for the period of viability of the child is a dangerous course and the responsibility should be shared by fully explaining the dangers to the mother. In these cases the location of the placenta, the existence and location of adhesions, and the condition of the patient prevent the establishment of any fixed mode of procedure and the surgeon must be guided by his judgment at the time of operation.

To the general practitioner special interest centers in the cases of recent rupture. These are the emergency cases to which he is first summoned and upon his promptness and skill depends in great measure the life of his patient. The case which I have to report belongs to this class.

Mrs. O. H., *aet.* 24 years, is the mother of two children, four and two years of age, respectively. Family history negative; has never been seriously ill. Confinements were not unusually difficult. She enjoyed good health until about one year after the birth of the second child, when she suffered from leucorrhoea, irregular, and, at times, profuse menstruation, and occasional pains in the region of the right ovary. She did not consult a physician concerning these symptoms. In

May, 1903, she noticed that menstruation was unnecessarily profuse and accompanied by cramping pains in the lower abdomen. The same symptoms were observed in June. On July 4th, she was seized with severe pain in the right side of the pelvis, and became quite faint. A physician was summoned and relieved her by morphia, hypodermatically. After this experience she was quite weak for a few days but soon recovered and discharged her usual household duties. On the night of July 17, I was first summoned to see her. She had taken a short walk and was about to enter the house when she was suddenly seized with excruciating pain in the abdomen and fell down in collapse. When I arrived the pulse was very rapid and thready, the skin clammy, perspiration profuse, extremities cold, breathing shallow and rapid. There was intense thirst, nausea and vomiting. The abdomen was very tender. Vaginal examination revealed enlargement of the womb and a slight discharge of blood from the cervix.

Morphine and atropine were administered hypodermatically, the foot of the bed elevated, an ice bag applied to the abdomen, and nearly a quart of hot normal salt solution transfused.

Preparation for abdominal section was made without delay and on the morning of July 18, was anaesthetized by Dr. J. W. Martin. With the assistance of Dr. G. W. Moore the abdomen was opened in the median line, the patient being in the Trendelenberg position. When the peritoneum was opened, dark blood spurted twelve inches above the abdomen. As the pulse was very weak and the signs of hemorrhage still present no time was lost in removing clots. The womb was grasped and the gestation cyst recognized in the right tube close to the cornu to which it was attached by a broad base. Clamps were applied to the ovarian and uterine arteries on either side of the cyst.

The clots were now removed by double handfuls and the field of operation inspected. The gestation cyst was as large as a hulled walnut and was ruptured posteriorly. It was removed by cutting between the clamps. The ovarian artery was tied at the brim of the pelvis and the right tube and ovary removed. The opening left by cutting the cyst from the right cornu was rapidly closed by a continuous Lembert suture of catgut and the abdomen closed without a drain. During the operation the patient received nearly a quart of hot salt solution subcutaneously and at the close of the operation the abdomen was flushed out with the same solution, strychnine and atropine were administered during the latter part of the operation. Shock was quite severe for three or four hours but the patient soon rallied and made a good recovery.

Menstruation occurred in the latter part of the following month and continued regular until November 1903. She is now in the seventh month of an apparently normal uterine pregnancy. Her general health is good and she has thus far suffered little pain.

* * * * *

DISCUSSION.

Dr. L. S. McMurtry, Louisville: The essayist has brought out his case very well. His management of that case, and his presentation of the subject certainly reflect very great credit upon his ability.

This is certainly a subject of very great importance, and from the statistics which have been presented by the essayist, I think the conclusion is justified, that when we take a case, we should endeavor to learn whether we have an ectopic pregnancy to deal with, or not. The truth is, our statistics do not tell the whole extent of this condition, for most of these statistics were made at a time when the condition has hardly more than been discovered.

This condition is being viewed with increasing interest, owing to the danger of this accident, as the rupture of a tube may result in fatal hemorrhage.

It is remarkable, though, how long a patient will go in these cases, sometimes, without having fatal results. A gentleman who is here now refers me to a case where a woman laid in bed for five weeks, with a large clot of blood. She lived through it, and after the operation was completed, she made a good recovery.

These operations are not so dangerous to life as we often suppose.

Many authors state that they can recognize the condition before the rupture. The trouble about that is that many patients never consult a physician before that time. If such a diagnosis is made, it may be accidentally discovered.

In regard to the treatment, what the essayist says about this is thoroughly sound. That is, as soon as your diagnosis is decided upon, the abdomen should be opened, and the clots turned out. This will almost invariably, when properly done, terminate just as the case which has just been reported to you. These cases nearly always get well, if the pelvis is cleaned thoroughly during the operation. It is important to bear in mind that we are doing surgery on a very anemic patient, and in the use of normal salt solution, we have a means of combating the anemia, and if we do thorough work, they will almost always recover.

* * * * *

Dr. W. H. Wathen, Louisville: I fully agree with what Dr. McMurtry has said with reference

to the immediate danger from hemorrhage in ectopic pregnancy.

In my experience in operating for 15 years in cases of ectopic pregnancy, I have seen but one case that died before an operation could be performed, and in nearly 100 cases I have had but two cases to die after operation. This patient reacted from the hemorrhage, and I was called in twelve hours afterward, and when I reached her just after a secondary hemorrhage, she was dying. With this exception, though I have had blood extending to the naval, no death from hemorrhage has resulted. The hemorrhage may cause much shock, but the patients generally recover from its immediate effect, just as most patients do from gastric hemorrhage. We must if possible, protect our patients from a recurrence of the hemorrhage, generally by an abdominal section. If the rupture has occurred a number of days before the surgeon is called, the patient can be very successfully operated upon per vaginam, as Dr. Kelley and I have done for many years, with beautiful results. I have operated for as many as 30 cases by this method, and the only death was where the patient died from what appeared to be an abscess of the liver. In other cases, however, you cannot obtain these good results by the vaginal route. A useful fact was demonstrated to me a few weeks ago in operating for extra-uterine pregnancy, where the intra-peritoneal rupture occurred six weeks previously. There was a coagulated blood tumor half the size of a man's head. It was entirely surrounded by what appeared to be a fibrinous capsule that prevented any leakage of blood or serum into the free peritoneum. The intestines were extensively adherent to this capsule. This teaches that intra-peritoneal hemorrhage in ectopic pregnancy may cease and the blood become isolated by the formation of a surrounding and investing capsule.

* * * * *

Dr. A. T. McCormack, Bowling Green: The point which seems to me should be emphasized most emphatically is that the diagnosis is the most important and difficult point.

I have had the pleasure of seeing seven cases of ruptured tubal pregnancy, and have had the privilege of studying these cases very closely. All the cases except one, recently married, had borne children, and were subsequently sterile for several years; all had had leucorrhoea for some time preceding the ectopic pregnancy, and the menstruation was irregular in all these cases.

I would emphatically submit that in these cases, until the diagnosis is decided positively, morphia should not be used.

What I wish to emphasize is that in a woman presenting the history and symptoms just described, we should expect this condition.

I am satisfied that, if in the operative and other work which I have had, I have seen seven cases during the last seven years, there must be a large

number of these cases, and that only a small percentage of the cases are recognized or reported.

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Dr. Salmon, in concluding: I have nothing to add.

TWO CASES OF TYPHOID FEVER WITH SUPPURATING PA- ROTID GLANDS.*

By WALTER BYRNE, M. D., RUSSELLVILL, KY.

Mr. President and Gentlemen of the Logan County Medical Society:

I desire to present to your notice and consideration two cases of typhoid fever with suppurating parotid glands. They were and are to me very interesting and also very distressing cases, for I lost the first case, death occurring at the end of the fifth week. After a hard fight, the second case pulled through, thanks to whom; my medicine, the mother's watchful care, or just the constitution of the patient?

These acses appeared about the same time, the last case being in the fourth week of my first case, so you see I had them on hand at the same time. I have wondered if it were possible for me to have conveyed the virus from the first to the second case. If I did, why do you suppose it attacked a patient seven miles away and did not poison other cases of fever I was attending within a stone's throw, you might say, of the first case? I did not use the same thermometer in any of these cases.

If the virus was carried by me from one case to another direct, then typhoid fever must be a contagious disease. My understanding of typhoid fever is, "it belongs to that class in which the morbid agent virus or poison is developed within the body, but in order that it may be reproduced it must be deposited in decomposing organic matter exterior to the body; it is then rapidly reproduced and when received into a healthy organism gives rise to diseased processes. It cannot be directly conveyed from the sick to the healthy, but only through the excrements of the sick or through decomposing organic matter exterior to the body, with which such excrements must have been in contact. There may be all the elements necessary to its reproduction, such as decomposing animal and vegetable matter, but the disease will not be developed unless there has been added to this decomposing mass the specific poison of the disease."

But to our cases:

CASE I. M. L., age 16, height about five feet nine inches; weight about one hundred and twenty pounds; complexion fair; hair

dark; eyes blue; slender build. Was complaining five days before my first visit, which was on July 7, 1903. The patient was very nervous and fearful he was going to have typhoid fever. Temperature 101; pulse 120; respiration 20 and sighing; could not fill his lungs well; tongue heavily coated with white fur; spleen enlarged; slight tympanites; no spots; no delirium; nausea, but no vomiting as yet; bowels inclined to act.

The surroundings were excellent. An ideal upstairs room, large, ceiling high, good ventilation free from draughts. Parents were intelligent, devoted and careful. I enjoined upon the family the need of boiling all the water used for drinking, the disinfecting of all excreta and the necessity of burying it, the changing of the bed linen, etc., all of which was carried out to the letter. The patient was kept in bed and no solid food was allowed. One great drawback was, my patient did not like milk. I insisted he should use it at regular intervals but he had to abandon it, as it caused nausea and vomiting. In place of milk diet, broth and beef tea were used. The rise in temperature the first week was a typical one, step ladder one, and the fastigium was reached at the end of the first week, 102 3-5; pulse 110; respiration 20; no spots made their appearance; slight tympanites but yielded readily to turpentine stupes. Second week: No spots; tongue cleaned off; no delirium; no tympanites; no tenderness over bowels; spleen soft but still enlarged; no nose bleeding; kidneys normal; bowels under better control; sighing respiration not so marked; nausea, an intense thirst. Temperature began to fall slowly and by the middle of the week morning temperature was 98 4-5 to 99 degrees; evening temperature 99 to 99 1-5 degrees; pulse 82 to 88. Patient drank some milk punch at regular intervals and retained it. About the middle of this week the patient complained of soreness in front of right ear, the parotid gland was enlarging. Now mark this, while the gland continued to enlarge and went on to suppuration there was no sudden rise in temperature. Third week: Tongue slightly coated with white fur, never brown or dry; bowels more disturbed; nausea more intense, and frequent vomitings; no mutterings or delirium; intellect perfect, marked interest in current events; morning temperature 98 3-5 to 99 degrees; evening temperature 99 to 99 2-5 degrees; pulse 88 to 90; night sweats; no marked tenderness or tympanites. As the right parotid gland seemed breaking down I opened it July 20; it discharged freely. About the middle of the week the left parotid gland commenced to enlarge. Fourth week: Tongue moist and white fur; at commencement of this week

* Read before the Logan County Medical Society, March 17, 1904.

morning temperature 98 to 99 degrees; evening temperature 99 to 99 3-5 degrees; pulse 84. About the middle of this week the patient passed blood clots in his stools, well defined sloughs, oval shaped. The left parotid gland continued to enlarge. The fourth day of this week the evening temperature jumped to 103 2-5 degrees; pulse 120. The question with me then was, was the rise of temperature due to intestinal lesions or to suppurating process going on in the left parotid gland? Temperature next morning 98 degrees; pulse 88; still no delirium; no marked tenderness over bowels; bowels acted about eight times in twenty-four hours; no more blood clots. Fifth week: First day, morning temperature 97 degrees; evening temperature 101 2-5; pulse 120; no delirium; patient extremely nervous; blood clots in almost every stool; constant vomiting, glairy, greenish fluid, but not offensive. Second day, I called in consultant who advised opening the left parotid gland. On opening gland no pus was found but in a few days it suppurated freely. The temperature rose to 105 2-5 degrees; pulse 130 and more; patient remained rational until the day before he died, August 8th. No eruption ever made its appearance.

CASE II. L. G., age 11; complexion dark; hair black; eyes brown, well nourished; rotund figure; was sick a week before my first visit on July 31, 1903. His parents had been dosing him with quinine, etc., thinking he had malarial fever, but as the fever failed to yield, they concluded to send for the doctor.

The surroundings in this case were just the opposite from those in my first case, except in the nursing; the parents were intelligent, devoted and careful; the room was on the ground floor, small, badly ventilated and with low ceiling. I felt I had a case of typhoid fever with unfavorable surroundings. I gave the same instructions as to boiling the water, disinfecting excreta, changing bed linen, etc. Kept the patient in bed and allowed no solid food. The patient liked milk. I saw him first at 4 p. m., July 31. He was stupid and delirious; temperature 103 2-5 degrees; pulse 120; he could be roused but soon dropped back into seeming unconsciousness; respiration 24; tongue moist but coated with heavy white fur; tympanites marked; spleen enlarged and bowels constipated.

At my next visit on August 2, at 10 a. m., temperature was 101 degrees; pulse 110; muttering and singing; had to be held in bed; nose bled freely at night; no spots. My next visit was on August 4, at 4 p. m., Temperature 105 1-5 degrees; pulse 130; left side of face very much swollen. As the swelling had come on since midnight I was hopeful that I had only abscess of a tooth to deal with.

The patient was more rational than at my other two visits; tympanites better; no diarrhoea; tongue coated with white fur; no spots; nose bled profusely again at night; some nausea, but no vomiting, the nausea I think was from blood swallowed when the nose bled. August 6, 4 p. m. Temperature 102 degrees; pulse 100; no spots; side of face not as much swollen, and more marked over left parotid gland. August 8, 4 p. m. Temperature 102 degrees; pulse 100; no spots; spleen soft, but still enlarged; kidneys normal. August 10, 10 a. m. Temperature 100 degrees; pulse 90; no spots; tongue still coated with white fur; no tympanites; no diarrhoea; I opened left parotid gland which discharged freely; the right side of face and right parotid gland were beginning to enlarge. August 12, 11 a. m. Temperature 103 1-2 degrees; pulse 120; nose bled; patient was dull and stupid muttering and picking at bed clothes; no spots; bowels loose with pea-soup discharges. August 14, 4 p. m. Temperature 102 degrees; pulse 110; bowels under better control; no bleeding from nose; night sweats; patient begs for something to eat. August 16, 4 p. m. Temperature 99 3-5 degrees; pulse 100; patient still begs for something to eat, watermelon and fruit being his chief desire in that line; bowels normal; spleen diminished in size; right parotid gland very much enlarged; the external canal of right ear almost closed. August 18, 4 p. m. Temperature 100 degrees; pulse 110; opened right parotid gland which discharged freely; no mutterings or delirium; no nose bleed; no tympanites; bowels normal; no spots. August 20, 4 p. m. Temperature 99 3-5 degrees; pulse 100; bowels normal; right parotid gland still discharging, discharge from right ear; patient wants to eat; sleeps all night. I saw the patient on the 23rd, and 26th, of August. Temperature 98 3-5; pulse 90. He continued to improve and made an uninterrupted recovery. No eruption in either case.

KERATITIS.*

By A. L. BUTT, M. D., OAKVILLE, KY.

My reason for selecting this subject for a paper to be read before this society is because of its importance to the general practitioner. Of all the eye troubles with which he has to deal the various forms of corneal inflammation make up the greater number. Hence I know that something said upon this subject will interest the society much more than some complete or intricate problem in optics or ephtholmology.

Keratitis (or corneitis as it is more gen-

*Read at the meeting of the Logan County Medical Society, September 5, 1904.

erally known) is an inflammation of the cornea, of which there are a number of types; among them we have dendriform, simple idiopathic, diffuse interstitial, fascicular, *hypopyon*, lymphatic, neuro paralytic, parenchymatous, phlyctenular and others, all of which are described in your text books.

As a rule, these apparently insignificant troubles are first seen by the family physician, and the first treatment, and frequently the only treatment given, is by him; hence he will readily see the importance of not passing the subject by lightly.

The most valuable period in the treatment of eye diseases, as in all other diseases, is at the beginning. A prompt and proper supervision of what might appear to be a trivial disturbance usually results in saving the eye, which if neglected might be followed by serious trouble, such as corneal ulcer, nebulae leucoma, staphyloma, or possibly total blindness.

A review of the anatomy and histology of the cornea will greatly aid us in a more intelligent consideration of our subject. Composed of five layers as follows: The first, made up of a transparent stratified pavement epithelium of several layers in thickness, and directly continuous with the epithelial layer of the conjunctiva, but, of course, more transparent. This layer is simply known as the corneal epithelium, abrasions or disturbances of which result in the visual dimness present in the minor eye troubles, such as conjunctivitis, etc.

The second layer is the anterior basil membrane of Bowman, a homogeneous elastic membrane, a thin layer of refractile tissue which is not so easily disturbed by the milder inflammations of the eye.

The third layer is a very important part of the cornea known as the *substantia propria*. It is composed of a mass of bundles of lamellae of fibrous connective tissue, united with the super-imposed lamellae with a kind of cement. Between these fibrillae and within this layer are the *Pecklinshausen* canals. These spaces or canals convey the tissue juice, protoplasm, or corneal corpuscles which sustain the vitality of the cornea. They also contain the wandering cells, sometimes called the leucocytes or white corpuscles of the cornea.

With this network of interlacing spaces and canals, we can easily understand why a general purulent infiltration of the cornea may so speedily result from a small focus of pus cells. Pus in this layer must always be looked upon with suspicion and concern. It is in this layer that the various interstitial, diffuse or parenchymatous inflammations make their beginning, which, by the way, generally has a constitutional taint as its etiological factor.

The fourth layer is the posterior elastic membrane of Descemet. It is as clear as glass and very resistant to pyogenic destructive processes. Though bathed in pus anteriorly and posteriorly, as in ulcer of the cornea or hypopyon, it requires a great while to perforate it. A kind Providence seems to have placed this membrane here as a barrier to ordinary destructive processes, and so long as we can prevent perforation or bulging of this layer, we may look for favorable results in treatment. The case is not considered hopeless if perforation or bulging takes place, but is liable to be more serious.

The fifth layer is simply the endothelium lining this last mentioned layer.

The normal cornea has no blood vessels, some say no lymph vessels, but we have at least the above described spaces or canals which convey the protoplasmic corneal corpuscles. In reparative and diseased processes blood vessels are sometimes found over the cornea. The drainage system of the cornea is made up of the spaces and canals heretofore described, and the canal of *Schlemms*. The nerves are from the corneal plexus of the ciliary.

As to the types of corneitis, I have thought that four classes might be made to include them all; superficial, perforating, interstitial and posterior, all of which terms are self-explanatory.

The causes might be classed into trauma and constitutional.

The symptoms of keratitis are generally redness or hyperaemia of the conjunctiva, photophobia, blepharospasm, pain, a sense of foreign body in the eye, etc., depending, of course, upon the nature and extent of the inflammatory action. Sometimes the conjunctiva is so severely inflamed at the same time as to produce a muco-purulent discharge. Other complications may arise, such as iritis, iridocyclitis ect., etc. The patient consults his doctor, frequently to have a "cinder or grit" as he thinks, taken out of his eye, and is surprised when the doctor tells him it is only an inflammation of the eye.

Have you an ulcer-phlegmonous or what? If the eye is extremely sensitive, and this is generally the case, use a few drops of solution of cocaine, *just for examining*; but don't, oh don't, continue the use of cocaine in the eye, and more especially is this to be observed when you have a tendency to destructive processes going on in the cornea.

Now for a thorough examination of the eye. Look for pus, use your artificial light, condenser, etc. Look for hypopyon, down deep behind the limbus cornea.

As to treatment, I would say that it is more or less simple. The *bete noir* in the treatment

of keratitis is pus. Whether it begins as sthenic or asthenic inflammation, traumatic or constitutional, be on your guard for this intruder and get rid of it as early as possible. Keep the eye clean with sublimate solutions. Watch for iritis; control the pholophobia with warm applications and the usual remedies. If there is perforation use atropine or esenine as the location of the perforation would suggest. If your patient is strumous or half nourished, put him on the usual reconstructives, tonics, etc. Advise plenty of exercise, fresh, open air, but avoid all undue excitement or exercise.

CYSTS OF THE PANCREAS.*

By P. C. LAYNE, M. D., ASHLAND, KY.

Pancreatic cysts are of frequent occurrence, and, owing to the fact that they, of all the surgical affections of this gland, are most amenable to operative interference they possess decided interest for the surgeon.

ETIOLOGY—The causes which bring about cystic degeneration of the pancreas, are yet obscure, and the many theories advanced regarding their genesis are only tentative.

Among the various factors so considered may be mentioned traumatism, inflammation of the glandular structure, hemorrhages into the gland, occlusion of the duct of Wirsung by calculus, new-growths and the like, and, perhaps, most important of all, some unknown alteration in the pancreatic secretion itself.

Mayo Robson, in his late Hunterian lectures, accords the most prominent place in etiology to chronic indurative pancreatitis.

Senn believes that in addition to this, there must be some change in the glandular secretions thereby preventing its ready absorption.

Something more than obstruction to the outflow of pancreatic juice is required, as Heidanheim demonstrated long ago that ligaturing the duct of Wirsung soon after it leaves the gland is followed by increased secretion primarily, but that secondarily the secretion is absorbed and eliminated through the kidneys.

Retention cysts are most likely to result when the secretion thickens and becomes incapable of absorption.

Cysts are more frequent in the tail than in the head or body of the gland.

The relative frequency as regards the sexes is about equal. Korte collected one hundred and twenty cases, of which sixty were in males, fifty-six in females, and in four the sex was not stated. The majority of the cases occur after the fourth decade.

SYMPTOMS AND SIGNS—The symptoms and signs of cyst of the pancreas are

very obscure, and until the tumor has reached sufficient size to be easily palpable the diagnosis is impossible without exploratory incision.

In the absence of tumor, the previous history of the case, with such symptoms as nausea and vomiting and severe epigastric pain, should lead the surgeon to carefully examine the abdomen in the region of the pancreas.

In traumatic cases, the onset may be sudden with nausea, vomiting, and epigastric pain, with decided evidence of peritoneal involvement. In another class of cases the onset is more gradual, often following a so-called dyspeptic attack, or colicky pains resembling gall-stone colic, or the general outline of the case may be that of no symptoms until the cyst has reached sufficient size to be easily seen and felt.

Steatorrhoea, azotorrhoea and glycosuria will be present in most cases if degeneration of the pancreas be sufficiently advanced.

Robson says that in all his cases, there has been a well-marked pancreatic reaction in the urine. Emaciation is well marked in some cases, and in others not at all noticeable, while the vomiting of blood is not infrequent.

The presence of a smooth, globular, tense or semifluctuant tumor occupying the epigastric or left hypo-chondriac regions, together with one or all of the above symptoms, make a distinct clinical picture that will admit of no other interpretation but that of cyst of the pancreas.

DIAGNOSIS—The diagnosis of pancreatic cyst is quite difficult, so difficult, indeed, that Tilman says: "It is made before operation only in the minority of cases."

The first thing to be established is the relation of the tumor to adjoining viscera, especially the stomach, colon, and small intestine.

The inflation of the stomach with air through the stomach tube will be of great assistance in this respect.

Cysts of the pancreas must be differentiated in some cases from enlarged gall-bladder, echinococcus cyst, or other fluid accumulation within the liver.

Echinococcus cyst of the spleen, cysts of the omentum and mesentery, left hydronephrosis, as well as ovarian cyst with long pedicle, must be eliminated before a diagnosis can be reached of pancreatic cyst.

Puncture of the cyst wall with needle for diagnosis purposes *should never be resorted to*, as the dangers of hemorrhage and the wounding of some important organ can scarcely be over-estimated. The fluid thus obtained offers very little that is of diagnostic value. The ferments of the normal juice may be present, but a fat and diastatic ferment may be

* Read before the Kentucky State Medical Association, Lexington, Ky., May, 18, 1904.

found in other cysts than those of the pancreas. The presence of trypsin (and this is so often absent) may be of value, but the unreliability of these signs inveighs strongly against exploratory puncture.

Another peculiarity noticed in these cysts, says Armstrong, is the transitory disappearance of the cyst." In Halstead's case, quoted by Osler, the circumference of the abdomen decreased from 43 to 31 inches in 10 days, associated with profuse diarrhoea.

Robson lays down the following signs and symptoms as pathognomonic of disease of the pancreas:

1. Digestive Symptoms. (a) Steatorrhoea, (b) azotorrhoea. Fat taken in large quantities is always found in the stools. The presence of azotorrhoea alone is not proof, but if associated with liporrhoea, and pancreatic reaction in urine the diagnosis is certain."

2. Metabolic Symptoms. (a) Pancreatic reaction in urine. "This, says Robson, is an infallible sign of the disease of the pancreas."

3. Special Symptoms obtained by artificial means. (a) Alimentary glycosuria—this is readily produced in disease of the pancreas. (b) Sahli's sign,—the failure to decompose iodoform when given by mouth with consequent elimination of iodine in urine."

"If," says Robson, "the urinary pancreatic reaction, diabetes, azotorrhoea, and epigastric tumor be present, the diagnosis of pancreatic disease is certain."

PROGNOSIS—The prognosis of pancreatic cysts may be considered favorable if seen early and dealt with by skillful surgery.

TREATMENT—Owing to the important anatomical relations of the pancreas, it is rarely feasible to excise tumors of this gland.

Incision and drainage first advised by Gusenbauer, is the operation of choice, and in almost all instances gives excellent results. Robson has reported 160 cases treated in this manner with 140 recoveries.

As hemorrhage is very frequently the immediate cause of death in operation on the pancreas, it has been advised to administer from 30 to 60 grains of calcium chloride three times daily for 48 hours before the operation. Healing by the incision and drainage method requires from one to nine months.

CASE—Miss M., 26, white, domestic, consulted me in 1900 for severe pains in epigastric region. Examination revealed the fact that she had been suffering from these painful attacks for several months past, and that they usually followed some indiscretion in diet, and for that reason the stomach was considered the offending organ. The patient was well nourished and strong and had perfect health, with the exception of these painful attacks which came on at varying irregular intervals

and lasted for two or three days, and always required morphine to give relief. The functions of the kidneys and bowels were normal, and physical examination of the abdomen negative. The patient passed out of my observation at that time and I did not see her again for about a year, when I was called to determine the nature of "a swelling" as she called it, that was apparent beneath the costal margin close to the median line on the left side.

There was no difficulty in making out a tense, semifluctuant mass in the above region, but I was not able to say what the tumor was. On inquiry, I learned that since I had last seen her, the pain had been almost continuous, and that she had required morphine constantly to give her relief; that she had vomited at times and that the swelling in the abdomen was interfering with her stomach in a mechanical way.

I insisted on removal of the growth, but the patient said "It could not be a tumor as the mass was larger at times than at others, and that it would disappear without an operation." However, this was not the case, and as her suffering soon became unbearable, she readily consented to anything that promised relief. In May, 1902, I opened her abdomen in the median line with an incision from just below the xiphoid cartilage to the umbilicus and after very tedious and difficult separation of the adhesions between the abdominal wall, stomach, and great omentum I came down upon a tense, globular, cyst the size of a well developed foetal head, and traversing the surface of the cyst in all directions were vessels six to eight millimeters in diameter, the latter forcibly reminding me how fortunate I had been in not resorting to needle puncture in this case.

Careful examination demonstrated the tumor to be a cyst of the pancreas, and any attempt at removal would have been the height of folly. Accordingly the cyst wall was carefully united to the abdominal peritoneum with continuous silk suture, and the sac well incised, permitting the escape of about one litre of coffee-colored fluid, and the resulting cavity well drained and packed with gauze. It required about six weeks for the wound to close, at the end of which time the patient was up and about the house feeling as well as she ever did in her life.

SOME INTERESTING CASES.

By BASIL M. TAYLOR, M. D.

The unusual and interesting cases, their proper diagnosis and treatment, brighten our

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paths, break the monotony and cause our advancement in the profession.

I will present some of these cases that have been most interesting to me during an experience of ten years.

CASE I. I was called ten miles in the country one day to assist in a difficult case of labor. When I arrived at the house I found the two doctors in attendance out in the yard whittling on the fence. One was a doctor of fifty years experience and the other one was a graduate of a medical college, the ink on whose diploma was scarcely dry. They informed me that it was a shoulder presentation and she had been in labor three days and they could not deliver the child. Upon examination I found her temperature 103, and pulse 140. I, too, was fresh from college and the lectures of Prof. Anderson on the different presentations I would encounter, were still ringing in my ears. He described enough for practical purposes, but he neglected to describe the one I there encountered. On introducing my finger I found the right clavicle protruding between the labia. Following this up I found a foetus attached to the other end. I began a search for the arm that belonged to this and found it carefully wrapped in a towel lying on the table. It was a shoulder presentation and when the membranes ruptured the arm came down and in the combined efforts of these two men to deliver the child by pulling on this arm they had torn it completely loose from the body. When this came off the child did not think it advisable to present the other arm, so they gave up in despair. She was chloroformed and the child was easily turned and delivered. Strange to say, she recovered.

CASE II. Female, age 33, married seven years, oldest child 5 years of age. She had a miscarriage at three months in 1892, and a still-born child in December 1893, a third child was born in August 1895. Her labors were easy. One year after she married she noticed an enlargement in the right iliac region. It grew steadily and seven months after the birth of last child it was about the size of a child's head and reached to the umbilicus. An operation was advised to which she agreed.

I opened the abdomen and found both ovaries complete dermoid cysts. The right about the size of a child's head and the left about the size of a goose egg and tightly adherent in the floor of Douglas pouch. A lock of hair was protruding through an opening in the left ovary. Both were removed and found to be complete dermoid cysts with very thin walls. The recovery was perfect. The interesting feature in this case is the woman having dermoid cysts of both ovaries and bearing children.

CASE III. Boy, age 5, had, been complaining for several days with indigestion and his father gave him a dose of calomel and san-tonin. The next day his bowels acted once, passing two round worms. An enema was given him and during the day thirty-six worms were expelled, several crawling from the anus. He began suffering with severe colicky pains in abdomen and the third day after taking the medicine, I was sent for. I found upon examination, a doughy mass about one and a half inches in diameter extending from the cecum across above the umbilicus down into the left iliac region. There was no vomiting, castor oil taken by the mouth appeared in the stools. His temperature was 99-1-2, pulse 110. My diagnosis was internal obstruction from ascarides and an operation was advised which was refused.

Several enemata were given him during the day with no results. He gradually grew worse and on the sixth day they asked me to operate. His condition was almost hopeless. Temperature 100, pulse 140. I opened the abdomen and found about two feet of the ileum inflamed, oedematous and distended with ascarides. I opened the gut and delivered sixty-six ascarides matted and twisted together. I feared the gut damaged by the obstruction beyond repair, but his condition would not allow time for resection. I carefully closed the opening in the gut. He rallied from the shock but died on the third day after the operation.

CASE IV. Boy, age 12. No history of previous illness, came home from school Monday afternoon seemingly well. He was sent to the grocery for a package and after wandering around town for about an hour returned without the package and could remember nothing that had happened since he left home. He was placed in bed and a physician summoned. He found him with a normal temperature and in a semi-conscious condition and unable to give him any history or any symptoms. The doctor believed that very fat children were predisposed to "brain fever" and as this boy was very fat and he could find nothing else wrong with him, he diagnosed "brain fever." He left a purgative for the patient, but the nurse could not administer it. He remained the same except growing more stupid until Wednesday night when I saw him. I found him with a temperature of 97, pulse 72, respiration 14, and very shallow. He had swallowed nothing since Monday. His bowels and kidneys were acting involuntarily and he was in a profound stupor. I at once suspected pernicious malaria and obtaining a drop of blood diagnosed the case, algid form of pernicious malaria and advised quinine hypodermically. The doctor still

clung to "brain fever" and refused to give the quinine. Nothing was done and Friday at noon I was asked to take charge of the case. I found him in the same condition, temperature 97, pulse 72, respiration 14. Bowels and kidneys acting involuntarily, stupor profound. I immediately gave him 20 grains of quinine hypodermatically and continued it every three hours.

At 10 o'clock Saturday morning his temperature was 98 1-2, pulse 90, respiration 16. By noon he could be aroused enough to swallow, and quinine in 5 grain doses was given by the mouth every three hours. At 6 p. m. his mind was perfectly clear, but could remember nothing that had happened since leaving school Monday afternoon.

His recovery was rapid and he has not had a return of the trouble. He rapidly lost his surplus fat and to-day is tall and slender and in perfect health.

CASE. V. In September last, I was called to an adjoining county to insert an intubation tube in a child suffering with laryngeal diphtheria. Upon arrival I found the patient, a boy, aged 5, very restless and gasping for breath. He had been sick three days and gradually grown worse. I immediately gave him 2000 units of antitoxine and then inserted the tube with perfect relief in breathing. In four hours 1500 units were administered. The thread was left in for immediate withdrawal, should the tube become closed with membrane. At the expiration of ten hours I withdrew the tube to allow and detached membrane to escape. In a few minutes he coughed several times, turned blue in the face and expelled a complete cast of entire trachea and about one inch of the larger bronchi. The membranous cast showed that the trachea had trifurcated, three separate bronchi the same size had been given off instead of two.

The tube was again inserted and allowed to remain for two days and then removed. The recovery was uneventful.

CASE VI. I was called to a neighboring town last August to see a case in consultation. On arrival I found a child seven months old suffering with intussusception. On Thursday evening previous, while playing around on the floor it began to cry as if in acute pain and this was soon followed by vomiting. The parents thinking it a case of colic, had a physician prescribe for it. The symptoms grew more severe and the next morning the physician was called.

The stools were bloody mucous and a tumor could be plainly seen on the left side, just above the *umbilicus*. The physician informed the family that the tumor was some organ that had slipped out of place, but would go back alright. A purgative was administered

and this followed by doses of castor oil. The stools soon became pure blood and the child's condition grew alarming. I saw the case Sunday at noon. Its temperature was 102, pulse rapid with fairly good volume. I explained the gravity of the case to the family and that an operation was the only chance and this chance a very slim one. They asked for the operation which I performed. On opening the abdomen I found that about 8 inches of the ileum had slipped through the illeo cecal valve and the cecum with about 4 inches of the colon had slipped into itself. On account of the oedema this was very difficult to reduce. About 4 inches of the ileum and the cecum were gangrenous. This was as quickly as possible resected and the anastomosis made with a small Murphy's button. The child was profoundly shocked and lived about thirty minutes after the operation. I mention this case to show the importance of an early and correct diagnosis of all pains in the abdominal cavity, that are classed under the head of colic.

CASE VII. I was called at daylight one morning to see in consultation a boy, age 15, who was suffering with diphtheria. The patient died just as I entered the room. I was then asked to see his brother, age 12, in the adjoining room, who was supposed to be suffering with gastric catarrh. His temperature was 97 1-2, pulse 120, and very weak. He had been sick two weeks and as he had been vomiting and had pains and fever, the diagnosis of gastric catarrh had been made and he had been treated accordingly. The patient was breathing through his mouth and an examination revealed both nostrils tightly plugged with diphtheritic membrane. There was a deposit in the pharynx about the size of a pea. The case was plainly one of diphtheria with the deposit in the stomach and nose. I injected 3000 units of antitoxine and in twelve hours the patient began to vomit pieces of membrane as large as the palm of my hand. The nostrils were also opened by the membrane becoming detached and thrown off. The antitoxine was repeated, but the patient died in three days from sepsis and exhaustion. The interesting features in this case are the location of the deposits.

EMPHYEMA IN COUNTRY PRACTICE.*

By D. G. SIMMONS M. D., ADAIRVILLE, KY.

A consideration of the subject of empyema necessarily pre-supposes, by way of causation, some consideration of inflammation of the pleura. However, the scope of this paper will not permit anything like a lengthy review of pleuritis. But there are a few features in con-

* Read before the Logan County Medical Society, April 5, 1904.

nection with that disease to which I would like to direct attention before dismissing the subject.

First. Pleuritis is developed very much more frequently than is ordinarily apprehended. Not that it is necessarily so obscure in its symptomatology when the proper effort is made to identify it, but for want of a careful physical examination from day to day, its prominent symptoms otherwise obtained are so frequently attributed to pneumonia, pleurodynia, intercostal neuralgia or other simulating diseases, that its identity is frequently not recognized.

Second, as to its site. While pneumonia is much more frequently seen on the right side, pleurisy is equally prone to select the left side, and usually at the lower portion of the left side. Along with a chill and cough, if there is violent pain in the right side, look out for pneumonia with probably a touch of pleurisy. With the same preliminaries of a cough and chill, if there should be cutting pain in the left side, pleurisy may always be suspected rather than pneumonitis. Any persistent and distressing pain about the chest, especially if on the left side, should invariably invite a thorough examination.

Third. Another peculiar feature of pleuritis lies in its tendency to extend to neighboring serous structures. I am not certain that my observation along this line corresponds with that of others, but in the majority of cases of pleuritis to which I have been called, I have observed more or less peritonitis or pericarditis, and sometimes I have seen both.

Given now a case of accumulation of fluid in the pleural sac, accompanying a case of pleuritis usually, sometimes following it, and sometimes accompanying a case of pneumonia, what will we do with it.

The first consideration of course would be to determine what was the nature of the fluid, because upon that depends the manner of treatment to be adopted. If the fluid is serous and in considerable quantity, there will be less pain after the effusion, there will be enlargement of the corresponding side, bulging of the intercostal interspaces, and more or less displacement of the heart, according to the quantity of the effusion. With the treatment of this serous effusion of the pleura we are not concerned in this paper.

On the other hand if the fluid should change from serous to purulent, or if it should be purulent from the first, there is usually great pain and tenderness from the first, bulging of the interspaces, dyspnea, displacement of the apex-beat of the heart, sometimes as much as several inches, with hectic fevers and copious night sweats.

These symptoms would usually be amply

sufficient to distinguish between serous and purulent contents of the sac, but no one would be quite willing now to omit puncturing the sac, in order to definitely determine the nature of its contents. If it proves on puncture to be an accumulation of pus, then the next thing is to empty the sac by surgical means. Aspiration, it is said, has been occasionally resorted to successfully in empyema, and it is also said that sometimes a purulent collection has been removed by absorption but both processes are too slow, too rare and too unreliable to justify any loss of time and further prostration of the patient by waiting on either one of them.

The proper treatment is identified with that for any other abscess, viz: through opening and free drainage. The best site for making the incision is a little posterior to the middle of the rib's length, that is, about the axillary line and midway between the seventh and eighth, or the eighth and ninth ribs. This incision should be made long enough to receive the finger, and above all things, at the lowest point practicable in order to secure free drainage. It is a good rule to use one-half grain of cocaine by hypodermic injection at the proposed point of puncture about ten minutes before operating, to paralyze sensation.

If the patient is very nervous, and there is nothing to contraindicate its use, chloroform may be used until the pus is flowing freely.

In order the better to illustrate the technique of the procedure, I will cite in some detail two cases which came under my own observation, and will then deduce such lessons as they seem to emphasize.

CASE I. The patient was a six year old boy of healthy parentage and a robust constitution. He had a violent attack of pleuritis of the left side, with agonizing pain and most acute tenderness to the touch. It was astonishing what large doses of morphine were necessary to secure anything like even approximate rest. The temperature ran from 102.5 to 105 degrees. Friction sound was distinct over the lower left side. While the pain was not pronounced over the lower left pleura where the friction sound was most distinct, pain and tenderness extended over the precordial, gastric and splenic areas, involving, as I took it, some pericardial and peritoneal complications.

The pain and tenderness were somewhat relieved by the appearance of the effusion on the second day, and the friction sound practically disappeared. After some day's observation the left side measured one inch larger than the right, with some bulging of the interspaces. There was dullness on percussion, and absence of respiratory murmur over the lower left side, and weakened respiratory murmur over left

upper lobes. Soon after this irregular hectic fevers set in with profuse perspiration.

After sterilizing the chest the patient was chloroformed and made ready for paracentesis. A large aspirating needle was thrust into the sac at the eighth interspace and a syringe full of sanæous pus was brought out. This established the existence of empyema. An incision was at once made into the sac two inches in length in the place of puncture in the axillary line, and three pints of thick pus were discharged. The cavity was washed out with solution of boric acid, two drainage tubes were introduced and secured by safety pins and adhesive plaster, and after protecting the projecting ends of the drainage tubes by a circular collarette pad, the wound was dressed with sublimate gauze. The tubes were removed daily, cleansed, and after washing out the cavity as before, sometimes with normal salt solution, the same dressings were kept applied. Emptying the cavity was facilitated each day by causing the patient to practice forced coughing and straining.

The cavity was gradually closed and the drainage tubes were forced out by about one month after paracentesis. The lung was considerably pushed and crowded upward by the pus collection, but as the cavity closed up by means of the forced coughing and straining exercises, the lung expanded and perfectly reoccupied its normal position.

I was more fortunate in this case in not having any adhesion between the visceral and mural walls of the pleural surfaces than can usually be expected. During the suppurating stage he used every six hours tonics of iron, cinchona, strychnia, etc., to combat loss of strength and flesh.

This boy made a perfect recovery and within a few months he was as rosy and robust as ever.

CASE II. This was a ten year old girl with rather a scrofulous cachexia. The effusion, which resulted from a pleuritis of the left side, seemed to be purulent from the first. The pleuritic inflammation seemed to take on a hectic form within a few days, with exhausting night sweats, enlarged side, and bulging interspaces. An exploration with an aspirating needle revealed a pus accumulation. This case was treated identically like case No. 1, except that the tonics and reconstructives were supplemented with cod liver oil and pushed more vigorously. The pus removed when the side was opened, amounted to about two pints, and was rather flakey in character. The cavity was closed and the tube removed in about ten days, and the compressed lung expanded perfectly.

The deductions to be drawn from these two

cases and the preliminary observations seem to be about as follows:

First. The great importance of promptly recognizing the existence of pleuritis, so as to abort it if possible before any purulent accumulation occurs, and if that proves to be impossible and empyema is developed, then the still greater importance of its removal before the system is exhausted by sepsis, and before the displaced lung and heart form adhesions and become fixed in their abnormal sites.

Second. The utter futility of delaying free incisions and complete drainage in the hope that nature will dispose of the pus in some other and better way.

Nature in these cases, needs that assistance of art, and art can never do more effective work than the prompt removal of these pus accumulations.

Third. It is insisted that this operation is within the capacity of any competent country doctor, since it requires only a diagnosis proven by puncture, a little determination, and only a few simple instruments and appliances.

PROGRESS IN GENERAL SURGERY.

Under Charge of IRVIN ABELL, M. D., LOUISVILLE, KY.

An unusual Ovarian Condition. Lewis Schooler, in the October American Journal of the Medical Sciences reports the case of a married woman, 24 years of age, mother of two children, coming to operation for tumor in left side of pelvis and abdomen. Upon opening the abdomen it was found that the uterus was dragged upward and to the left, the Fallopian tube felt like a firm, round, cord double its normal size, extending from the uterus to the enlarged and displaced spleen, which was firmly attached and admitted of no displacement. The spleen was six times its normal size, black and glistening like an old blood clot, but firmer. At the lower pole there was complete and firm union of spleen, ovary, and fimbriated extremity of tube. The tube, ligament of ovary, and upper edge of broad ligament were hard and firm on account of tension. The adhesions were divided between two ligatures and organs replaced, patient recovering. Three months later she was operated on for obstruction, due to adhesions along course of descending colon. The uterus was normal in size and position. The spleen was in like condition and, instead of the intensely black color present at the time of the first operation, was normal in appearance. Patient recovered. She had never suffered from malaria and the blood count showed no anomaly in that direction.

Treatment of Post-Operative Vomiting by Gastric Lavage. Charles S. White, Annals

Surgery, August, quotes experiments by F. B. Turck and others, proving that ether and chloroform are eliminated to some extent by the gastric mucous membrane and as this tends to increase post-operative vomiting with its attendant pain, discomfort, and danger to the integrity of sutures in abdominal wall and deeper parts, he has employed gastric lavage as a means of lessening this tendency. He follows the usual preparation given patients previous to the administration of an anaesthetic, no food for ten hours and bowel emptied by means of laxatives; at the completion of operation while the patient is still fully under the influence of the anaesthetic, the stomach tube is introduced and stomach washed with a normal salt solution or plain sterile water until water returns clear and free from mucus. This method has not abolished post-operative vomiting in his experience but has reduced it 50 per cent. in frequency. He says, "We have been using gastric lavage at the Emergency Hospital since September, 1903, and, instead of becoming sceptical of its efficiency, our confidence has increased as we become familiar with its workings." The three indications for its use are: (1). Where there has been insufficient time for preparation of patient, the stomach containing food; (2). Where the anaesthetic is administered for an hour or longer. (3). Where patient, previous to operation has suffered with attacks of nausea and vomiting or chronic gastritis.

A Case of Suture of the Heart With Recovery. Francis T. Stewart, in the September American Journal of the Medical Sciences, reports a stab wound of heart treated by suture, with recovery. The knife entered between third and fourth ribs, punctured lung and anterior wall of left ventricle. The heart was reached by an osteoplastic resection of third and fourth ribs, turning flap toward sternum; the wound in heart was closed with silk, a continuous suture being employed. During operation saline containing adrenalin was introduced into vein. Recovery followed. Neither before nor after operation could adventitious sounds be heard in connection with heart's action. Many cases of healed heart injuries discovered at autopsy have been reported, the first reliable one being by J. Wolf in 1642. During 1895 Del Vecchio was the first to successfully suture the canine heart; in 1896 Solomoni, and in 1897 Bode successfully closed wounds of animal hearts by suture. In 1896 two unsuccessful attempts to close human cardiac wounds were made, one by Farina, and one by Coppelen, and in 1897 Rehn published the first successful cordiorrhaphy in man. Including these three cases and the one reported there are

60 cases reported in literature with the surprisingly high recovery of 38 1-3 per cent. Of these 55 were stab wounds, and 5 were gunshot wounds, two of which recovered.

Studies Upon the Capsule of the Kidney. Haven Emerson in the October American Journal of the Medical Sciences, publishes the results of a series of experiments devised to ascertain whether the capsule would allow or prevent the absorption into the blood of salts in solution and to determine the result of decapsulation of the kidney, upon the animal and the organ. His conclusions in regard to the first proposition were that when the kidney capsule is intact absorption does not take place in sufficient amount to be appreciated by chemical tests in the urine, and that only when a strong solution of a powerful systemic poison was used was there any indication of the test substance in the blood stream, as shown by constitutional symptoms: that strong antiseptic solutions in the vicinity of a decapsulated kidney may do harm by direct absorption into the kidney parenchyma, thus furnishing a reason in addition to those accepted for surgical technique for limiting the fluids, allowed to come in contact with such an organ, to sterile water or physiological salt solution. His experiments regarding the second proposition were conducted on dogs, rabbits and sows and from the results of these and previous experimental studies reported in his paper, concludes that evidences based on observations of kidneys in various animals from 5 to 339 days after decapsulation conclusively proves that decapsulation of a normal kidney may cause an interstitial nephritis of greater or less extent, varying from a simple invasion of parenchyma with connective tissue processes in the early cases, to marked and advanced replacement fibrosis, and accompanying degeneration of renal epithelium in the tubules and occasionally, even atrophy and destruction of the glomeruli. There are usually found, sooner or later, after decapsulation, some new blood channels between the capsule and tissues or organs which may have become adherent; these later become gradually compressed with the contraction of the connective tissue, and the greater firmness and denseness of the newly formed capsule, until their number is inconsiderable and their size greatly reduced, so much so as to show no striking difference from the vascular supply found in a normal intact capsule. The thickness of the new capsule and the abundance of blood vessels seem to be accompanied in proportion by an increase of the connective tissue infiltration and by a parenchymatous degeneration of epithelium. The theory that an increased vascularization formed by the development of con-

tracting scar tissue is able to accomplish a gradual absorption of the interstitial connective tissue among the tubules and glomeruli, thus freeing them from pressure, may be justifiable from the clinician's standpoint, but it has scanty encouragement from experimental research.

Repair of the Urethra by Transplantation of the Urethra of Animals. J Hogarth Pringle, in the September Annals of Surgery reports three cases of defect of urethra repaired by grafting into their tissues portions of the urethra of the ox. Two were men who had sustained complete and extensive rupture of the urethra in the perineum, and the third a boy with hypospadias, in whom there was a deficiency of the floor of the urethra for the whole of the penile portion of the channel. The injured urethra were operated soon after the accident, before cesciccasatrical tissue had formed; the destruction and laceration in both cases were severe, both requiring suprapubic systotomy and retrograde catheterization to locate the proximal end of urethra. Drainage was employed and after the subsidence of primary reaction, a portion of urethra of young bullock was obtained, being carried from slaughter house in hot sterile salt solution, and after freeing the ends of urethra sufficiently to enable them to be sutured to the graft, the bullock's urethra was stitched in position, wound closed, and catheter inserted in bladder. Both grafts were successful, but in both cases a fistula resulted at juncture of graft with urethra; in one several subsequent operations failed to close the fistula, the urine being passed through the entire distance of new graft, and more than two years after grafting showed no evidence of stricture. In the second case the fistula closed and patient subsequently succumbed to pyonephrosis complicating renal calculi. In both cases the calibre of urethra remained normal. In the third case the patient was a boy 14 years of age with marked hypospadias, the urethra opening at perno-scrotal junction; after making a preliminary perineal section for drainage, the curved penis was straightened, flaps made along site of future urethra and urethra from bullock stitched in position, same being covered by skin flaps mentioned. The ultimate result was very gratifying, the urethra being restored and easily permitting the introduction of a No. 7 bougie. With the exception of a case reported by Dr. C. Fenwick, in which a portion of urethra from a sheep was grafted in operating for intractable stricture, these three cases are the only instances of animal urethra grafting yet reported.

Contribution to the Surgery of the Deep Urethra. J. Frank Lydston in the October Annals of Surgery reports a case of severe

traumatism of the perineal urethra with extensive destruction of same caused by patient, 32 years of age, jumping from buggy during a runaway, and falling astride the wheel. The perineum was freely opened and after freeing the urethral ends, they were trimmed smooth and brought together with a continuous fine catgut suture over a large sound. Drainage through catheter for ten days; primary union followed and when patient was seen some time after injury urethra easily admitted a 33 French sound.

He also reports two cases of urethro-rectal fistula following prostatectomy by the perineal method. Both cases presented fibrous prostates which were removed by morcellement, the fistula appearing on the eighth and twenty-first day respectively; the one appearing on the eighth day was located about one inch above external sphincter and was treated by division of sphincter and rectal wall to point of fistulous opening, hoping that it would close as does the wound made in operating for rectal fistula. The result was disappointing and required two more operations, the last a perineal rectoplasty which was successful. In the second case the fistulous opening was situated just below the vesical orifice and was quite small, so that after healing of perineal wound no gas or faeces were passed per urethram but all of urine voided at regular intervals through the rectum. As the opening was quite high and afforded no inconvenience other than the knowledge that the urine passing through the rectum was abnormal, no effort was made to repair it.

The Union of Ununited Fractures of the Neck of the Femur by Open Operation. Leonard Freeman, in the October Annals of Surgery, makes a plea for the open operation in ununited fractures of the neck of the femur occurring in young or middle aged patients. The choice of cases for operation should be considered from three points of view, age of the patient, resisting powers, and amount of disability. Only the young and middle aged, whose general conditions and resisting powers are good, and in whom suffering and disability are pronounced are to be treated by this method. The author reports a case occurring in a man 32 years old with an ununited fracture of six months standing treated in this way; the anterior incision was employed, the fragments were freshened, and held in position by Parkhill's bone clamp in conjunction with extension. The clamp was allowed to remain but two weeks on account of slight infection at point of bone penetration; extension was continued eight weeks. Result, one and one-half inches shortening, flexion to right angle, rotation almost normal, weight could be borne quite comfortably when not walking, some pain on walk-

ing. He refers to thirteen other cases collected from literature, in only ten of which was the result given; these have been on the whole, encouraging. Nearly all operators have reported good motion and satisfactory function. There always remains some shortening, varying from one-half to one and one-half inches or more. This arises from absorption of bone, from loss by freshening the fragments, and from imperfect adjustment; but it is usually not great enough to become a large factor in the final result.

Aseptic Surgical Technique. In the October Annals of Surgery, A. J. Ochsner and George H. Monks contribute extensive articles on Aseptic Surgical Technique, being a resume of the methods employed in daily practice by each. The articles are too extensive to be fully reviewed in a limited space but will fully repay a careful study as exemplifying the methods in use at their respective clinics. The summary of minimum requirements for aseptic work as given by G. H. Monks are, (1). Materials to be sterilized in saturated steam in the auto-clave, for one-half hour, under 15 pounds pressure, rubber gloves and salt solution under 10 pounds pressure. (2). In hospitals without proper facilities for sterilization of absorbable ligatures, these to be obtained from reliable dealers. (3). An operating room which can be easily cleaned, and which is cleaned, where the air is kept as free from dust as possible, where draughts are minimized, and where formalin fumigation is thoroughly and systematically practiced. (4). A hot bath for the patient, and a cleansing and shaving of operating area the night before operation if possible, (as an extra precaution). Just before operation, a second cleansing and sterilization with 70 per cent alcohol or some equally efficient method. (5). Thorough mechanical cleansing of the hands, and sterilization by 70 per cent alcohol or some method equally efficient. (6). Ten minutes boiling for instruments, special attention being paid to taking apart clamps and haemostatic forceps or at least unlocking them. (7). Caps, masks, and gloves always to be worn, at least on major cases. (8). Warm sterile salt solution for irrigation and washing. (9). Belief in the aseptic idea, fixed aseptic habits, and aseptic cooperation, on the part of all engaged in the operation. (10). Instruction of assistants and nurses as above set forth.

SPECIAL ARTICLES.

SOME FACTS AS TO DOSAGE OF POTASSIUM IODIDE.

I have recently had occasion to give large doses of potassium iodide, and so great did

the dose become that I instituted investigations to ascertain how much of the drug my patient was taking. When he was taking 480 drops of a saturated solution, as I usually prescribe in the following manner:

Potassium Iodide 2 ozs.
Aqua 2 ozs.

I was under the impression that he was taking an ounce of iodide of potash daily, but an investigation convinced me that this was not a fact. DaCosta (Modern Surg, page 205) says, "in obstinate tertiaries or in nervous syphilis, the Iodide should be run up to an enormous amount (from 30 to 250 grains per day). An easy way to give iodide is to order a saturated solution each drop of which solution equals 1 grain of the drug." This statement confirmed my opinion and former teaching that this patient was taking 480 grains of iodide of potassium in the 480 drops of saturated solution which I had ordered for him. I referred to Tyson (Practice of Medicine, second edition, pages 204 and 205). He says, "In the treatment of the third stage (syphilis), the iodides are especially useful. It is here that massive doses of iodide of potassium are indicated and often produce such magical results. The most convenient method of administration is the saturated solution of which one drop contains a grain."

Again I thought from this conclusion that my patient was taking 480 grains daily. Referring to Pepper, (American Text Book of the Theory and Practice of Medicine, Vol. 1, page 733) he says, "The iodide is so soluble that a watery solution, one minim of which represents a grain of the salt, is readily made and is permanent." Here we notice that he uses the term "minim," which is accurate, instead of the word "drop," used by other writers. An investigation was instituted along the line of dosage, and has revealed a new state of affairs to my mind, as it does not correspond with my early teaching and the teaching of the books of to-day concerning the dosage of this drug. In this brief article, I will not go into details of the case in hand, but in order to make the article more complete, will give the most important history of the case.

The patient, Mr. C., age 43 years. Occupation mail-agent. Mother died of Abdominal Tumor at he age of 65 years. Father died of congestive chill at the age of 70 years. Previous health good. Three brothers and one sister living, all in good health. One sister dead, having died at the age of ten years of typhoid fever in 1866. General health good until June, 1903. Soreness developed in the scalp, alternating first on one side and then the other, con-

stantly. This soreness continued until about the 14th of last October, when it disappeared while under the treatment with iodide of potassium and mercury. Treatment continued about five months. There was also sickness of stomach, attended with nausea and vomiting, which disappeared under iodide of potassium and mercury treatment. About same time, (10th day of June, 1903), there also appeared dimness of vision, both eyes being involved, accompanied with stuffy feeling in the head. Vision continued to decline until October 14th, when he was unable to go about without assistance. This symptom gradually improved under the use of iodide of potassium and mercury. Dimness of vision begun on the outside of visual field, gradually approaching the center, with a more or less irregular line of demarcation. If any difference in the visual field at all, vision in the upper and inner quadrant was the most acute. When under the treatment of iodide of potassium and mercury appetite improved, nausea disappeared. Weight which had been 167 pounds and dropped to 145 pounds, again went up, recovering all that was lost. Vision improved until he was able to see the time of day by the watch. After stopping treatment of iodide of potassium and mercury, he lost three or four pounds in weight and became very nervous. There were two or three relapses which were not effected by discontinuance of medicine, except at one time, when the medicine was discontinued and vision dropped to a lower point than ever before, and soreness developed in the head, which latter symptom disappeared, when again placed upon iodide of potassium and mercury.

With the above history and with the flat denial from him that he has ever had any indications of syphilitic infection, it hardly seemed advisable to place him upon iodide of potassium, with the hope of benefitting him, from a syphilitic stand-point. As there was a possibility of there being a growth in the brain which had caused this loss of vision, nausea and vomiting, I referred him to Dr. John K. Morris for an ophthalmoscopic examination, who returned the report that the optic nerve was as white as chalk. This I attributed to an atrophy following a neuritis which it was too late now to detect. As he had been treated with iodide of potassium, and the only benefit that he had derived from any treatment was through this drug, in combination with mercury, and with the bare possibility facing me that the iodide would absorb and eliminate a syphilitic or inflammatory growth in the brain, I placed him upon iodide of potassium, giving him the above-mentioned prescription, directing him to start with 30 drops, increasing one drop each dose, three times daily in a tumbler

of water and to drink freely of the water. At the same time, there was a possibility of increasing the activity of the retina by the use of radium, as was done by Tracy and Lunder, as related in the following report:

"Dr. S. G. Tracy, (April, 1904, American X-Ray Journal), under the heading of 'Radium and Blindness,' says: 'In The Medical Brief for January quotes Dr. Luder, of Berlin, who found a distinct improvement of vision of two boys almost totally blind. He also reports some experience upon a case of optic atrophy of four years' standing. The radium tube was held half an inch from the eye for three minutes. Luminosity appeared and remained for half an hour. This treatment was repeated three times a week, and during the four weeks he has been under treatment improvement has been very marked.'

In the present case, however, I used the radium every day at half inch distance, and have continued this exposure up to the present time, with electric treatment in the form of hyperstatic applications to the eyes, head and spine, also given daily.

The above history is sufficient to give you an insight into the character of the disease in the present case. In the course of about six weeks, vision began to improve and has continued up to the present time. He is now able to distinguish pictures on the walls and also the kind of neck-tie or cravat one is wearing, though he is not yet able to make his way through the streets unassisted. At present there is no increase in temperature or respiration. Pulse is 108, appetite good with no indigestion, sleeps well and has increased about four pounds in weight.

There are two questions which I wish to consider in connection with this case.

First. How much Iodide of Potassium is he taking daily?

Second. Is he a syphilitic?

In answer to the first question, you will notice that he is taking an enormous quantity, in fact, more than any one I have ever heard of, and have failed after a thorough search through the literature at my hands to find any one who has taken anything like the quantity he is taking.

By referring to American Text Book, Vol. I, page 733, I find this statement: "Not rarely, it seems almost impossible to produce iodism. I have frequently given the iodides up to or even beyond 6 drachms a day." He also adds that, "I do not believe that larger amounts than these are of any special service, and I am not sure that any advantage is gained by going beyond a daily dose of one half an ounce."

The patient in question is at present taking

1200 drops of the following prescription:

Potassium Iodide.....8 ozs.

Aqua.....8 ozs.

and according to the authors above referred to, who state that one drop represents one grain of the drug, he is taking 1200 grains of Iodide of Potassium daily. Long before he reached this enormous dosage, I became skeptical, as above stated, as to the exact amount he was actually taking, and by actual count found that the above prescription gave 6975 drops, (or 18 doses and 50 drops). With the assistance of a druggist, it was ascertained that the above prescription, when compounded, would make exactly 10 ounces and 2 drams, which as the authors term, is a saturated solution. If 6,975 drops of a saturated solution of potassium iodide makes 10 ounces and 2 drams, then the following table is correct, and by referring to it, one may see exactly how much potash the patient is taking:

1 oz. of saturated solution contains 875 grs. Iodide Potash.

1 "	"	"	"	680 drops.	"	"
480 drops	"	"	"	264 grs.	"	"
895 "	"	"	"	480 "	"	"
10 "	"	"	"	5.8 "	"	"

The following table will show that there is a difference in the manner in which the dosage as above compounded is dropped, being dropped by the druggist from a dropper:

1 oz. of saturated solution contains 860 drops.

480 drops	"	"	"	208 grs. Iodide Potash.	"	"
1100 "	"	"	"	480 "	"	"
10 "	"	"	"	4.8 "	"	"

It will be seen from the above figures that it is practically impossible to get exactly the same number of drops out of a given quantity of the above solution. The first table is a result of a very careful dropping by the wife of the patient, and shows that in taking 480 grains of iodide of potassium, he is obliged to take 895 drops from his bottle, and as he has now reached 1200 drops as a daily dose, I am sure that he is taking 636 grains of iodide of Potassium.

The last table given above is the result of dropping one ounce of saturated solution of iodide of potassium by the druggist and gives a total of 860 drops to the ounce.

It is important to note in this connection that where the directions are given to increase the dose at one drop per dose that the patient takes 9 drops more than he did the day preceding. In other words, if your directions are to begin with 30 drops and increase one drop each dose, taking three doses daily, he will take 30 the first dose, 31 the second and 32 the third dose, making his first day's treatment. The second day he takes 33, 34 and 35 drops, which as you will see is nine drops more for the second day than the first, instead of three more on the second day than the first, as is or-

dinarily reckoned, by reasoning that the patient takes three doses per day, increasing one drop each dose.

In considering my last question as to whether he is a syphilitic, I will ask the readers of the *Kentucky Medical Journal* their opinion, is it possible for a man who is not a syphilitic, giving absolutely no history of syphilis, to take iodide of potassium in the above-mentioned dose without showing some signs of iodism? There is at present absolutely no indications of approaching iodism. That he is not being injured by these large doses is clearly indicated by his good spirits, splendid appetite, sleeping well, an increasing weight and a gradual improvement in his vision. If the above article will assist any reader of this journal in a more accurate dosing of their patients with iodide of potassium, I will feel repaid for the time required to get the above data.

J. T. DUNN.

DIFFERENTIAL DIAGNOSIS OF THE INFECTIOUS DISEASES.

Smallpox, scarlet fever and diphtheria are the most dangerous of the infectious diseases and this makes it important that an early diagnosis be made to save life and protect the public health. Moreover, there are several comparatively harmless diseases that sometimes closely counterfeit them, which fact also renders it important that an accurate diagnosis be made in order not to unduly alarm the family and to avoid the inconvenience and expense of quarantine, closing schools, preventing public meetings, etc.

Sometimes diseases no less than individuals are imitative and not infrequently appear and parade under false colors, deceiving the most eminent in authority; therefore, small wonder that the inexperienced err in diagnosis. And when we remember the protean character of not a few of the infectious maladies, notably syphilis, and consider that no two individuals, even with similar environment, respond alike, and that the same individual may and often does react differently at different times, we can readily appreciate the difficulties in arriving at an accurate diagnosis in this class of cases.

Probably the two infectious diseases most frequently imitated by other diseases are smallpox and scarlet fever. Rarely syphilis closely simulates smallpox. As Schamberg says, "it may seem strange that smallpox and syphilis should ever be confounded." On reflection, however, it will be seen that the two diseases may have many symptoms in common. They are both infectious diseases, due, we may assume, to the invasion of the blood with a mi-

cro-organism. Each has a period of incubation, at the end of which there develop certain general manifestations accompanied by an exanthem. The resemblance may be further accentuated by the fact that the varioliform syphilide is not rarely associated with and even preceded by general aches and pains. It is particularly the pustular syphiloderm that is apt to be confounded with smallpox. This may be the first eruption to manifest itself, or it may follow several months after the appearance of a macular or papular syphilide. The eruption at times may appear rather suddenly and pass through the period of macula, papule and pustule in a surprisingly short time. The lesions may be very firm to the touch, and in other respects closely simulate those seen in smallpox. Many authorities testify to the fact that in some cases the differential diagnosis is at the onset quite impossible. Hutchinson claims that the simulation of the variolous eruption by syphilis is the most marked example of syphilitic imitation. The papules are shotty to the finger, have depressed centers, affect the same region as variola and resemble it so absolutely that nothing but the history of the case can help the physician to a correct diagnosis. Attention to the following points, however, will facilitate a correct diagnosis between syphilis and smallpox:

(a) *History of Infection.* With syphilis we get the history of a chancre and not infrequently have present such associated evidences as mucous patches, sore throat, alopecia, etc.

(b) *Difference in Onset.* The onset in the two diseases is quite different as a rule. Smallpox usually begins suddenly with a chill soon followed by fever, severe headache, backache, nausea and vomiting. Even mild smallpox may manifest marked initial symptoms, while syphilis, in some cases, may produce initial symptoms and lesions strongly imitative of smallpox, the rash being preceded by fever, chill, headache, backache and general pains.

(c) *Sudden Eruption in Smallpox.* In smallpox the eruption is complete in three days ordinarily, while in syphilis it usually requires a number of days and appears in crops.

(d) *Distribution of Eruption.* Sometimes the distribution of the eruption is identical, but in most instances there are variations. Smallpox usually involves the dorsal surfaces of the hands and wrists and in rare cases the palmar and plantar surfaces of the hands and feet. Syphilis rarely affects these localities.

(e) *Character of the Eruption.* The eruption in smallpox is more or less uniform over the body, whereas syphilis is characterized by a multiform eruption, papules and large and small pustules are interspersed and these varying in different stages of evolution and involution. In syphilis the vesicles and pustules

are usually pointed and involve merely the summits of the elevations, and do not become full and globular, as in smallpox.

(f) *The Course of the Eruption.* The course of the eruption in syphilis is relatively chronic compared with that of smallpox, the latter undergoing decided change in six or seven days, while the former shows no marked change in this period.

The other infectious disease most often confounded with modified smallpox is, varicella. Due attention given to the history of the case, nature of the invasion, appearance, distribution, character and course of the eruption will usually clear the diagnosis. In varicella the invasion is milder, the eruption is not usually complete until the third or fourth day, arrives in successive crops appearing usually first on the trunk. The vesicles vary in size and are often oval in shape and superficial. The course of the eruption is characterized by its rapidity as compared with that of smallpox, however much modified, and there is no secondary fever of suppuration.

Several diseases may be confounded with scarlet fever in its earlier stages, notably, rubella, measles, diphtheria if accompanied with an erythema, acute follicular tonsilitis, etc.

Attention to the nature of the onset, the appearance, distribution, character and course of the eruption, together with the general symptoms, suffice in a short time to set the alert aright. In rubella and measles the onset is less intense and the course of the disease is milder. The rash a little later, occurs in clusters and circles and has a blotchy, purple appearance. The rash in scarlet fever shows early, beginning on the neck, is bright red as a rule, punctate in appearance and uniformly distributed.

The absence of a rash as a rule in diphtheria makes the diagnosis easy; however, when scarlet fever and diphtheria coexist it is difficult to establish the fact.

Acute follicular tonsilitis, especially if it is associated with a drug eruption or the intense diffuse erythema due to certain foods, may be confounded with scarlet fever, a mistake not infrequently made.

The initial stages of erysipelas about the face and neck, complicated with a sore throat, especially if in the case of a child, is more or less confusing. The history of the case and the usually sharp outline of the erythema in erysipelas soon differentiate it from scarlet fever.

Acute exfoliating dermatitis may present a faithful clinical picture of the scarlatinal rash, however the systemic symptoms of scarlet fever are absent.

A safe clinical rule in any case with a follicular or membranous tonsilitis associated with

an erythema, is to incriminate scarlet fever until the diagnosis can be cleared.

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RECENT OBSTETRICAL PRACTICE.

The campaign inaugurated by Oliver Wendell Holmes against puerperal sepsis has been conducted so vigorously during the past sixty years, that the present generation of physicians and nurses instinctively guard against puerperal infection. The principles of asepsis and antisepsis are so thoroughly inculcated that puerperal septicaemia has become a rare condition, and when we can say the same in regard to the various other abnormal conditions which may arise during labor, or the puerperal state, the obstetrical art shall have well nigh reached perfection.

While puerperal infection is rare, yet a slight or low grade infection is not uncommon, and when it does occur, it is most frequently due to wounds of the parturient canal, through which infection gains entrance to the system. These wounds are most frequently the result of insufficient care of the perineum during the latter part of the second stage of labor, or of the frequent and unnecessary use of instruments. When wounds do occur infection enters through them invariably as the result of improper or careless repair. One will never err by carefully closing all wounds of the parturient canal, even those which seem slight and insignificant.

A great many lacerations of the perineum may be avoided by taking the proper care during the latter part of the second stage of labor. While in this country it is the general custom to deliver the patient in the dorsal decubitus, still the English method of delivering on the left side has many advantages, and undoubtedly the best results are obtained by a combination of the two—that is by allowing the patient to remain in the dorsal decubitus until the head reaches the perineum, after which she is directed to lie on her left side. In this latter position the obstetrician has complete control of the descending head, and can guard the perineum to the greatest advantage.

When the perineum begins to bulge in advance of the head, cloths which have been wrung out of very hot water, are firmly pressed against it, so that the natural elasticity of the tissues may be retained, as long as possible. The perineum must first be anointed with vaseline to prevent burning. In controlling the head the object should be to keep the forehead well upwards and backwards, allowing the occiput to descend as far as possible in front, so that the nape of the neck may pass well under the pubic arch; thus allowing the

head finally to pass over the perineum by its smallest available diameter. The head is now delivered during an interval between pains, and is not allowed to pass out during a pain. After the head is delivered, the body of the child is slightly rotated and the shoulders and arms delivered on either side of, but not over the perineum. The same procedure is carried out as far as possible during the delivery of the hips. As the great majority of labors are normal, the frequent and indiscriminate use of instruments is due, either to the lack of proper directions to the patient whereby she may be enabled to properly direct the efforts to bring forth the child, or to the impatience of, or dislike for this class of work on the part of many physicians. The writer during a varied obstetrical practice extending over a period of nine years has had occasion to use instruments only twice.

When a laceration of the perineum unavoidably occurs it will be found on either or both sides of the posterior column, extending for some distance upwards on the vaginal wall, as well as outwards on the labia. In repairing such a laceration the most important point is to ascertain the whole extent of it, and more especially of that portion of it which extends upwards and inwards on the vaginal wall, making sure that the first suture closes the upper and internal angle of the wound. The succeeding sutures are then placed from above downwards, until the upper or vaginal portion of the wound is closed. Then leaving the posterior column free, one sutures the perineal wound from below upwards, and finally sutures the posterior column at the juncture of the vaginal and perineal portions of the wound; thus preserving the sphincter like action of the vaginal orifice. The sutures should be inserted well beyond the margins of the wound and in tying them sufficient pressure only should be used to just coapt the edges; for if they are tied too tightly they will defeat the object for which they are used. The sutures may be removed on the seventh day.

During the puerperal period the routine practice is to have the nurse whenever she changes the napkins, give a vulvar douche; which is done by simply separating the labiae with the fingers of one hand, and, observing that the sphincter vaginae is intact so that none of the douche may enter the vagina, allow a stream of plain sterilized water or boric acid solution if preferred to flow over the lower portion of the vulva. More or less of the lochia lodges here and if not removed, furnishes a medium for microbic growth, which, later on, may prove the starting point for more serious infection. While it is thus possible to avoid all but the most trivial complications which arise in connection with the parturient canal, it is

not always so easy to avoid those many and annoying complications which arise in connection with the breasts. The writer was much impressed, while attending the clinics of the Montreal Maternity Hospital during the past summer, by the method which they are employing in the routine treatment of the breasts of pregnant and puerperal patients, and believing that they have evolved a method whereby these troublesome complications may be avoided, the writer shall take the liberty of outlining their method.

It is based upon the assumption that all abnormal breast conditions arise primarily from nipple infection and so during the final month of pregnancy the nipples and areola are bathed every morning with a solution of boric acid, dried well and then bathed with a solution of alcohol. They are again bathed at night with the boric acid solution and dried well, after which a small quantity of lanolin is rubbed well into the nipple and areola. Then immediately after labor the nipple is protected by covering it with a small square of oiled paper, such as confectioners use for wrapping caramels, on which is smeared a small quantity of the following ointment:

R. Bismuth oxid precip. zi
 Acid Oleic zvii
 Cera Alb. ziii
 Vasaline Alb. zix

Sig. Ungentine Cera Alb. Co.

Or if the nipples are fissured Balsam Peru is then added, thus:

R. Ungent. Cera Alb. Co. zviii
 Bals. Peru zvii

Sig Ungentine Cera Alb. cum Bals. Peru.

When it is desired that the child should nurse, the oiled paper is removed and the nipple well washed and dried, and the child placed to the breast. When the nursing is finished the nipple is again washed and dried, and a fresh portion of ointment on a fresh square of paper is placed over it. When there is acute congestion or overdistention of the breasts they employ what is known as the Y binder. This binder is made of two pieces of bird's eye cotton of about forty inches long and twenty-four inches wide. These are folded into two long strips the width of which depends upon the width of the breasts from the nipple to the edge of the gland. One portion of the binder is folded upon itself so as to form the two upper arms of the letter Y, while the other portion is pinned to the angle, thus forming the third arm of the letter. The breasts and surrounding skin are well dusted with talcum and the binders applied so that the angle is against the left side of the patient's chest on a level with the breasts. Two arms of the binder pass over the breasts, one above and the other below the nipples, the third or upright arm pass-

ing over the patient's back to the opposite side of the chest. Now on gathering the breasts well upwards and forwards, so as to approximate them, and drawing the anterior arms of the binder tightly across the chest and holding them firmly on the right side, almost any desired amount of pressure can be applied to the breasts by drawing forcibly on the posterior arm of the binder. The arms of the binder are now securely pinned together on the right side and held in place with straps which pass from behind forward over the shoulders. A small piece of absorbant cotton is now placed between the breasts, and if the patient is wearing an abdominal binder, the upper portion of it is pinned to the lower portion of the Y binder. The Y binder is allowed to remain for twenty-four or forty-eight hours, or until the breasts become soft.

The advantage claimed for the Y binder are, that it affords an evenly distributed and very firm pressure, which depletes the breasts of their excess of milk, as also of their venous and arterial engorgement, thus absolutely controlling their secretory function.

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THE TREATMENT OF FRACTURES.

We do not feel that we should assume an apologetic attitude when we invite the attention of the profession to the title of this article, although it is both homely and elementary.

Operative surgery merits and holds the center of the stage in modern practice. The allurements thereto are so glittering, the attraction so inviting and the pecuniary reward is apparently so considerable as to monopolize the efforts of the surgeon of recent years. On that account there exist reasonable grounds to suspect that the art and craft which contributed so munificently to the fame of surgeons of a preceding generation is being slighted in a degree out of proportion to the advancement made along other lines.

Dr. G. G. Davis, of Philadelphia, in a paper read before the Philadelphia Academy of Surgery, on January 4, 1904, remarks that aside from the influence exerted by the X-Ray, anaesthesia and antiseptics, but little progress has been made in the treatment of fractures and that little is mainly in the management of individual fractures. "Hamilton and Stimson," says Dr. Davis, "our old standard treatises, have not been surpassed nor displaced by any more recent publications." However, I am disposed to regard Scudder's new book as a work that marks a distinct advancement at least in the literature of our subject. In it he uses the newer nomenclature of open and

closed fractures instead of simple and compound. The treatise by Carl Beck commands our respect and enlists our interest the more truly because it is based upon the author's observation through the medium of the Roentgen ray.

The merry war between splints and plaster bandages is waged with as much ardor as ever, still I think I see signs of the cessation of hostilities in the rapidly growing favor of the molded plaster splint or gutter. Gibney is the champion of the plaster bandage and makes a plea for the more careful and thorough training in its application. He ascribes its unpopularity to faulty technique and imperfect knowledge in the method of its use, which opinion is in strict accord with the views personally supported.

The operation or open method of treatment has, as one might expect, under the auspices of antisepsis and anaesthesia, claimed the place of greatest prominence in the therapy of broken bones. The indications for this method of treatment have accordingly multiplied with surprising rapidity. Dr. George W. Guthrie, in *American Medicine* for March 7, 1903, advocates the direct fastening of fractures even in the patient's own home, trusting the means available under the circumstances to secure adequate cleanliness. The advantages of direct fixation as set forth by Fritz König are as follows: The avoidance of extensive callus, which is very important in articular fracture; close approximation; possibility of practicing passive motion inside of three weeks. According to Voelcker the chief indications for primary operation lie in cases of complete fracture where the exact application of dressing is very difficult and the treatment is simplified by fixing the ends of the bones, where the improved means of dressing cannot be obtained. Two fractures existing in the same limb at the same time, open fractures near to or communicating with a joint, as here apposition is difficult to maintain on account of the brevity of the fragment, König reports five cases of fracture in the neighborhood of the shoulder and one of the elbow in which treatment was begun by nonoperative methods, but he was led to operate at the end of a week by revelations of skiagrams. In every case the result was satisfactory.

Lane urges the necessity of primary operation in spiral fracture of both tibia and fibula. According to Voelcker the danger of infection is slight when the bone is accessible as in the tibia, more when the bone lies deep, as the femur. Lane points out that chances of infection are less when the fracture is exposed by a free incision and the fragments touched only with instruments and gloved fingers. Certain

other dangers are to be borne in mind, as suture may lead to delay in consolidation, or result in sinus formation or subsequent overriding. Unfortunately primary suture is most difficult of application and most liable of failure in the place we need it most, i. e. articular fractures. Special indications for primary suture exist principally in fracture of the patella. Strater reports a successful case in which the fragments showed a separation of 10 c. m. when the leg was flexed.

J. B. Roberts, of Philadelphia, reports great success in patella fractures following the use of a purse string suture of buried catgut. Martin recommends the open operative treatment for all fractures of the patella of more than one half inch separation. Lowenstine urges primary suture in oblique fracture of humerus with much displacement. Kocher advocates primary fixation in fractures of an apophysis. Primary suture is almost universally used in fracture of the olecranon.

The usefulness of the methods of direct fixation is strikingly presented in their secondary application for the cure of ununited fracture and in cases upon which osteoclasts is performed for the relief of deformities that may occur congenitally or exist as the result of faulty apposition following a fracture. Some notable results are recorded by Dr. C. E. Thompson, of Scranton, Pa., in the treatment of nonunion in fracture of the femoral neck in old people. It is beyond the scope of this article to discuss the operative technique, or the various devices proposed for retaining the bones in apposition. It is worth mentioning, however, that McCurdy recommends iron wire, on the ground that iron is a normal constituent of the system. Others recommend the use of ordinary joiner's screws.

Burghard has pointed out that in every fracture there are two features aside from the main lesion that demand special attention, viz., effusion of blood and tearing of the soft parts. It seems to us that the demands of these conditions are adequately answered by the proper application of a Plaster of Paris bandage. However, there is a growing favoritism for massage and early passive motion, that is notable among those who are opposed to plaster. Those who are skilled in its use do not appear to find a need for either, save for the passive motion in small joints, such as wrist and fingers, when situated distal to the site of fracture. It is but seldom, and that only to meet special indication, that plaster is used in the upper extremity, even by its most devoted adherents. Eisendrath makes a plea for the more general use of massage, but sets forth the following as contra-indications to its adoption:

1. Tendency to displacement.
2. Com-

pound fracture. 3. Where there is danger of infection on account of blebs or extensive abrasions. 4. The presence of fragments which project but do not penetrate the skin. In Breslau (Henle) fractures near a joint are treated by extension and massage is begun after nine days. The results are said to be satisfactory.

The doctrine of Lucas Championiere, which teaches the treatment of fracture upon a principle of nonsupport and massage has, as a general thing, met with disfavor in this country, although there are among us a few imitators of this illustrative Frenchman. I imagine it would require the firmest conviction on the part of the surgeon to fly in the teeth of an established tradition which is as deeply rooted in the minds of the profession as of the laity. I doubt if a practitioner bold enough to adopt the loose method of treatment could in the event of unfortunate results expect much protection from his professional brothers in case of legal action before the courts.

Personally we believe that he who employs the passive motion before bony union is restored must support a burden of discretion which we ourselves would shrink from. We have never yet become convinced of its utility, save as practiced upon the wrist and fingers when distal to a fracture of the forearm. It is advised by high authority inside of three weeks following fracture involving shoulder and elbow. On the other hand, Gibney has sounded a warning note on this point.

In considering the subject from the standpoint of special fractures we are pleased to note that surgery has assumed a more aggressive attitude in relation to sudden solution of the continuity of the femoral neck in the aged than was formerly maintained. Dr. Thompson, in his paper already quoted from, reports six cases of his own, besides gathering others from the literature, in which usefulness of the limb was restored by the use of a Plaster of Paris spica from toes to nipple combined with slight traction. Senn advises extension of the dressing down to the knee of the opposite side. He moreover incorporates a thumb screw device in the plaster so situated as to exert graduated pressure upon the great trochanter of the affected limb. His results are extremely encouraging.

Drs. Ruth and Maxwell, of Keokuk, Iowa, in a paper which appeared in the *Journal of the American Medical Association*, Vol. XL., p. 17, describe a method of treatment of fractures in the upper femoral third which they have used extensively and with uniform success. The method here employed contemplates the principles of combined lateral and longitudinal traction. The successful cases reported by these two observ-

ers include fractures of the femoral neck in the aged. Dr. Luther Sexton read a paper and exhibited a patient at the New Orleans meeting illustrating the utility of the plaster spica in fractures of the upper third (femoral) and we find many others scattered through the literature to which we might add half a dozen others from our personal experience as yet unreported.

In the treatment of Colles fracture reduction we believe, holds the place of prominence in technique. Our study of the various methods of numerous surgeons of equal skill and experience, together with our own clinical observations, lead us to conclude that of all fractures of the extremities this is hardest to reduce and easiest to retain, that perfect alignment can rarely be obtained without general anaesthesia. Whitacre has wisely called attention to the outward transposition of the lower fragment in this injury. Treatment of the supra condyloid fracture of the humerus by anterior right angle tin gutter and of the Y and T fracture of the lower humeral and external condyles of that of the internal and external condyles of the humerus, by acute flexion as figured by Scudder, we count as a distinct advancement. The open arthrotomy and McBurney hook has proven a veritable boon to victims of fracture of the surgical neck of the humerus with dislocation of the upper fragment beneath the coracoid process.

The Roentgen ray is epoch-making in its application to the diagnosis and treatment of fractures. Particularly is it useful in the recognition of fractures in children where we are most likely to err in diagnosis. Especially is this means a valuable aid in spiral fractures which often occur in the tibia or fibula and are frequently mistaken for sprains of the ankle. (Lane says that all fractures produced by indirect violence are spiral.) Also in making out fractures about the shoulder and lower fourth of the radius and about the elbow, do we find the X-Ray a present help in the time of need. Its main application to treatment is enabling us to discover discrepancies of alignment after the dressing has been applied.

Dr. Lewis G. Cole has written a paper, *New York Medical Journal*, April 9, 1904, in which under the caption "Skiagraphic Errors" he emphasizes the necessity of what he calls comparative skiagraphy, i. e. comparing skiagraphs of normal with those of the abnormal or injured part, both taken at the same altitude and angle. He further holds that the skiagram reaches the highest degree of usefulness in revealing the nature and extent of deformity following fracture and in those injuries where small particles of bone have been chipped off, or where a fracture extends into a joint.

Stockman, of Rotterdam, (*J. A. M. A.*, Vol.

2, p. 402,) treats open fractures by first cleansing the wound of all foreign matter as far as possible, then filling its cavity with Balsam Peru and covers with a liberal pad of gauze impregnated with the balsam. He then fixes the limb in Plaster of Paris. In ninety cases he seldom found it necessary to change the dressing but once or twice. Only three of the ninety had pus. Amputation was necessary in one case, on account of gas gangrene.

Anaesthesia for the application of dressing and the proper reduction of fractures we believe has met with universal acceptance.

Gibney admonishes as to the liability of a neighboring joint to become fixed subsequent to fracture, and remain so as a permanent deformity. One curious remote complication which I have seen recorded, but have forgotten the name of the reporter, was of aneurism produced by the popliteal artery beating against a projecting callus of a broken femur. The aneurism was noticed first several months after union.

The imprisonment of nerve trunks in callosities is often met with and exists as one of the most frequent distasters the surgeon has to contend with. The lower third of the humerus and the upper end of the fibula are the ones most frequently entailed. Lauenstein gives this as an indication for direct fixation in fractures of humerus.

The application of the new baking process has lately proven of value for the removal of inflammatory effusions in joints the subject of trauma.

In the main, this whole subject may be summed up under the two Rs—Reduction and Retention. The former is rendered simple and easy by the influences of anaesthesia. The latter still remains a severe tax upon the ingenuity of the surgeon.

This article does not contemplate fractures of the skull and vertebra.

G. A. HENDON, M. D.

Louisville, Ky.

OBLIQUE INCISION IN APPENDICULAR PERITONITIS.

"Signorelli says that the oblique incision should be used instead of the median in cases of peritonitis due to appendicitis. Even in cases in which the diagnosis of appendicitis is not certain, but where it is suspected that the peritonitis had its origin in the appendix, he considers the lateral or oblique incision less dangerous than the median, and points out that, if, after the former incision is made and nothing is found in the appendix, there is always time to make another median incision."

POISONED BY HERB DECOCTION.

"Two Italians are in Roosevelt Hospital suffering from belladonna poisoning. When taken to the hospital one was unconscious, the other so violent that it took several men to hold him down. The cause of the trouble is said to be a decoction made by one of the men, which both he and his workman drank as a remedy for a disordered stomach, and which was believed to be made of malva leaves. Malva leaves are said to be a regular home remedy of the Italians for stomach disorders. A few minutes after the men drank the decoction both became drowsy, but this state changed suddenly to great frenzy in the one while being conveyed to the hospital. A chemical analysis of the contents of the men's stomachs showed traces of belladonna."

SYPHILITIC REINFECTION IN A DIABETIC.

"Molle's case was in a commercial traveler, aged thirty-two years, who had a chancre in 1883 and took specific treatment for some seven months. He married, but his wife presented no signs of infection, save that she aborted twice at four months. Glycosuria was noted in the male patient in 1891. In 1898 a second chancre appeared and Molle diagnosed a genuine reinfection of syphilis, the usual secondaries developing in the typical way, although the attack was much milder than the first. The diabetes in this case was not due to the syphilis, but coexisted. Molle, after careful bibliographical research, declares this case to be unique."

TO STOP ASSAULTS.

"The Bucks County Medical Society, at their meeting of August 3, discussed at length the subject of assault upon women which are of late becoming so frequent. The sentiment of the society was shown by the unanimous adoption of resolutions asserting the necessity of the most drastic punishment in the case of men convicted of criminal assault and endorsing the bill drawn by Senator Grimm providing castration as the punishment of such offense."

INFLUENTIAL GASTRO-ENTERITIS.

"Physicians in Germantown report an epidemic of gastro-enteritis that is considered to be influenzal in origin. Children up to four years of age are attacked and there is usually accompanying affection of the respiratory passages. In addition to the diarrhea, vomiting and fever are present. The kind of milk or other diet used seems to bear no relation whatever to the onset of the disease."

KENTUCKY MEDICAL JOURNAL.

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DR. ADOLPH O. PFINGST

TWO NEW STATE MEDICAL JOURNALS.

We are glad to welcome two more State Medical Journals, that of New Jersey, with the title "The Journal of the Medical Society of New Jersey," whose first number appeared in September, and that of the State of Missouri, entitled "The Journal of the Missouri State Medical Association." *The Kentucky Medical Journal* gives these two new publications most hearty welcome into the field of State journalism, and wishes them every possible success in the way of stimulation of organization and in the development of matters medical of the respective States.

DOCTORS SHOULD WRITE.

The advice given to me shortly after the expiration of my term as interne at the Louisville City Hospital was to write. I replied, "I have nothing new to tell." "Oh!" said my friend, "write, it makes no difference what, just so you keep your name in print." That was said to me nearly twenty years ago.

Being a close observer and impressed by this older doctor, I have watched the journal writers (and I might say the medical society speakers, were I on that subject) and have noticed how they do succeed in gaining first a certain notoriety, but later if they make any effort at their writing there is a steady improvement.

Some systematic plan should be settled upon. One acquaintance of mine was advised by a prominent surgeon to select some special line and continually write upon it. The reason given was that sooner or later he would become associated in people's minds with that field. This man selected tumors of the neck, and for years wrote mostly on that subject. Of course selecting too narrow a field has its drawbacks, but systematic effort will certainly bring reward.

The trouble with too many of our brethren

is they want something for nothing. They wish to appear learned without doing the necessary study. Any man of ordinary mind can write agreeably on medicine in time if he will only first study books and then disease afterwards. Any man's carefully weighed observations are worthy of consideration. Do not for the dramatic effect state anything as true of which you do not believe you have reasonable proof. The habit of taking notes on cases is of immense value. If followed consistently for a time, the benefit will be apparent. Even the noting during life, of a complete diagnosis and then in the dead room verifying it with reference to each organ, will make the best diagnostician, who has ever tried it, open his eyes.

It is so easy for the brain to accommodate itself to the altered information and for the voice to say: "*Ah! Yes, Yes! Just what I expected to find.*" When nothing of the kind had been thought of. Even the verbal opinion can be considerably juggled with; but when it is written and stares you in the face you have to toe the mark. Now if this practice were followed more commonly and the results given to our medical journals they would become much more valuable to the busy doctor.

One should write what he sees, or thinks he sees, and not feel that he must limit his writing to mere compilation, though, of course, references to the opinions held by other writers are not objectionable. Whenever anything impresses one as out of the ordinary, that is the thing to study and report. By doing so he will broaden his own mind and possibly assist others to understand similar conditions. Do not be afraid to report facts because they are not in keeping with the so-called "authorities." Mistakes in medicine, as in every other department of life, are handed down from generation to generation until some strong spirit observes the error and dares to combat it.

Writing makes a careful man and the careful man is the safest and best doctor. Writing for one's journal and society gives one a personal interest as nothing else can. Therefore, by all all means write and of course write the best you can.

EWING MARSHALL, M. D.

Louisville, Ky.

THE LUNACY LAWS OF KENTUCKY.

It is a melancholy fact that no State in the Union has cruder and more nearly obsolete lunacy laws than has Kentucky. Doubtless they were the best attainable at the time they were promulgated, but State after State has advanced its laws until Kentucky is almost alone in compelling its insane to stand on the same plane as the burglar and be sentenced

under regular criminal procedure by a jury of laymen, often composed of irresponsible idlers about the court house. The shock and humiliation to the weak, depressed or helpless, and the prostitution of justice when the glib-tongued but dangerous paranoiac comes before the jury is familiar to all.

In the commitment of a supposedly insane person, the points which it is desirable to observe are: His protection against fraud, his protection from influences that may aggravate his malady and an easy, rapid method of protecting both the public and the patient in cases needing immediate treatment and control. The certificate of two reputable physicians who have been in practice not less than five years, who are not related to the patient by blood or marriage, and not connected with the institution in which it is proposed to place him—sworn before a judge of a court of record, amply secure these points. Of course, pending the establishment of a special State Hospital for inebriates, special provision for the commitment of liquor and drug habitues should be made in a general commitment law for the insane.

Some States notify the patient of his proposed commitment, while others do not. In one or two States, instead of requiring the committing physician to have been in practice for five years, he must have qualified before the proper official as an examiner in lunacy. Many States require that the certificate be made within a week of the examination, and the examination within from ten to twenty days of commitment.

A commitment law should also apply to private institutions (whose existence is not now recognized in Kentucky) with provision for voluntary commitments. The patient having been committed passes under the control of politics in its most vicious and inexcusable form. Fortunately most of our asylum appointees have been clean, honest men who have done wonderfully good work considering the circumstances. Indeed, when we see the new superintendents, old experienced stewards, farmers, engineers, supervisors, and even laundry girls, discharged and their places filled by others whose first and sometimes only qualification is their political affiliation, we almost forget that the percentage of recoveries is so small in our State institutions, that the standard of care is so low, and that there is no really scientific work being done in them, and are thankful that things are no worse. But Kentucky asylums need not be at the foot of the list. Our profession need not blush with shame every time our institutions are mentioned outside our borders, and the taxpayers need not lose the thousands of dollars they do annually, because of this condition, if the

State Medical Association would act as a unit against it.

As already mentioned, the present lunacy laws of the State recognize the existence of none but the State institutions and so take no cognizance of insane persons restrained in any part of the State outside of such institutions, except under the usual habeas corpus proceedings. This condition of helplessness on the part of the insane is aggravated, the best conduct of the asylums made more difficult to their managements, and the saving of much money to the State prevented by the absence of a State Board of Insanity. While the need of such a Board in this State is beyond question its proper composition and powers are matters not easy to settle. To the writer, a commission composed of three persons, one a physician having not less than ten years' experience in the care of the insane; the second a lawyer of not less than ten years' experience in his profession, and the third a capable business man, would seem the wisest plan. This commission (to be appointed by the Governor and ratified by the Senate) should have full authority over all State Asylums, with authority to supervise, license and, for cause, revoke the license of any private institution for the care of the insane. Others, perhaps better acquainted with political conditions in the State, strongly oppose this plan, claiming that it would be sure to make the situation still worse than it is.

The need of this reform being recognized by the profession of the State would suffice, as the exact law fitted to our needs could be worked out by the House of Delegates of the State Medical Association in time to be presented to the next session of the State Legislature.

GEORGE P. SPRAGUE.

Lexington, Ky.

KENTUCKY NOTES.

EXAMINATION OF APPLICANTS FOR LICENSE TO PRACTICE IN KENTUCKY.

The first examination under the new Kentucky law, of applicants for license to practice medicine in the State of Kentucky was held in Louisville on the 3rd, and 4th of October. There were twelve candidates present but two of these dropped out before the examination was completed. The result of the examination of the remaining ten will be published in the *Journal* as soon as report is made by the examining board.

* * * * *

QUACK CONCERNS DRIVEN OUT OF BUSINESS.

The Secretary of the State Board of Health informs the *Journal* that in the past month

two quack concerns have been compelled to discontinue. One of these was the firm of James & James, of Covington, Ky., who closed up October 1st. They treated men by correspondence. The other was the Red Cross Tuberculosis Concern, Sixth and Jefferson Streets, Louisville, which also closed on October 1st.

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CORRECTION OF AN ERROR.

In the October issue of the *Kentucky Medical Journal*, Dr. J. A. Alexander is credited with having contributed a most excellent report of Progress in General Medicine. We do not believe there is any such person in Kentucky, certainly not in Louisville, as Dr. J. A. Alexander. The printer should have credited the review to Dr. J. A. Flexner, of Louisville.

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BOOKS RECEIVED.

The *Kentucky Medical Journal* desires to make acknowledgement of the following books received:

Transactions of the Florida Medical Association, 1903-4.

Transactions of the Tennessee State Medical Association, 1904.

Transactions of the Medical Society of the State of New York, 1904.

Thirtieth Annual Report State Board of Health of Michigan, 1902.

COUNTY SOCIETIES.

[Secretaries of county societies are requested to furnish for this column, and without further notice, all county society news of interest, such as the date and place of the monthly meeting, notice of death and marriage, epidemic disease, and, in fact, everything which might be of interest to brother practitioners in the State.]

Editor Kentucky Medical Journal:

At a meeting of the *Butler County Medical Society*, held in Morgantown, Ky., October 4, 1904, Dr. R. L. Glasscock, of Brooklyn, Ky., was elected president and Dr. A. E. Gardner, of Morgantown, secretary.

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The *Bourbon County Medical Society* held its regular monthly meeting in Paris City Council Chamber, Thursday, Oct. 13-19, 1904, at 3 p. m. The following papers were read:

Clinical Charts, "Malaria," Dr. C. G. Daughtry; "Colles Fracture," Dr. A. C. Wilmott; Discussion opened by Dr. D. B. Anderson. "Hemorrhoids," Dr. W. C. Ussery. Discussion by Drs. C. B. Smith and W. C. Wilkerson.

C. G. DAUGHTRY, Sec'y.

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The *Calloway County Medical Society* held

its regular quarterly meeting at Murray, Ky., on Wednesday, October 5, 1904.

The society was called to order at 10 o'clock by the Vice-President, Dr. E. T. Dunaway, with the following members present: Drs. J. G. Hart, W. G. Johnson, Robert Overby, W. H. Mason, R. L. Grogan, Murray; C. O. Gingles, Kirksey; A. V. McRee, Harris Grove; A. F. Paschall, Crossland; G. H. Covington, Wadesboro; E. D. Covington, Wadesboro; Mit Miller, Hazel; W. F. Grubbs, Freeland.

Dr. G. H. Covington, an ideal member of a country medical society, read a very interesting paper on "The Use of Patent and Proprietary Medicines". The discussion which followed was very enthusiastic both pro and con.

Dr. C. O. Gingles, in lieu of a paper, made a short talk on "Typhoid Fever". The subject was generally discussed and it was generally agreed that the main points of treatment were rest, regulation of diet, hydrotherapy, with personal and general hygiene. It was suggested that too much medicine was often given.

Dr. J. G. Hart asked the society a very pertinent question as follows: "After attending septic and erysipelatos cases how soon and after what preparation can we safely attend obstetrical cases?"

Dr. Robert Overby read a very interesting paper on "Post Mortem Examinations". It was voted to have this paper published in the county paper for its influence on public sentiment against such work.

The society holds its regular annual meeting for the election of officers the first Wednesday in January, 1905.

W. H. GRAVES, Sec'y.

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The *Daviess County Medical Society* met at the City Hall, Owensboro, on Tuesday, September 20, 1904, the president, Dr. J. P. Heavrin, in the chair. Thirty physicians, nearly all members, attended.

Dr. J. S. Knox, of Whitesville, was admitted to membership. Drs. W. L. Barnett and W. L. Taylor made application for membership. The secretary read a communication from the State Secretary asking that we make the *Kentucky Medical Journal* the official organ of our society and that the secretary be instructed to report proceedings of meetings to that organ. Both requests were complied with.

Dr. W. E. Irvine read a paper on "Preternatural Labor." The paper was discussed by Drs. S. J. Harris, H. K. Osborne, S. Lambert and J. Glahn.

The Hon. G. W. Jolly read a very instructive paper on "Medical Jurisprudence," which was ably discussed by Drs. W. T. Stirman and J. N. Ellis. Mr. Jolly was given a rising

vote of thanks, and invited to dinner at the Rudd House as a guest of the society.

The society meets on the third Tuesday in March, June, September and December. All meetings are held at the City Hall except the June meeting, and the county physicians take dinner at one of the hotels as guests of the town physicians. In June we go to the country as guests of the rural doctors. This is done to bring about a good attendance and we always have it.

J. J. RODMAN, Sec'y.

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The physicians of Gallatin County met at Warsaw, Ky., the first of October and reorganized the *Gallatin County Medical Society*. The following members were enrolled: Drs. S. B. Robinson, Warsaw; Jas. S. Brown, Warsaw; C. H. Duvall, Warsaw; C. A. Meniffee, Napoleon; E. E. Bickers, Sparta, and J. M. Stallard, Sparta.

The following officers were elected for the ensuing year: Dr. Jas. S. Brown, President; Dr. E. E. Bickers, Vice-President; Dr. J. M. Stallard, Secretary-Treasurer; Dr. C. A. Meniffee, Commissioner.

The following program was arranged for the next meeting:

"Diabetes Insipidus," by Dr. S. B. Robinson: Discussion, by Dr. J. M. Stallard.

"Pneumonia," by Dr. E. E. Bickers. Discussion, Dr. C. H. Duvall.

It was decided to meet again October 25, 1904, then every two months thereafter. We have ten active physicians in our county and hope to enroll them all soon.

We had the pleasure of attending the Eagle Valley Medical Society October 4th. This society is composed of the counties of Owen, Henry, Corroll and Gallatin, and bids fair to be one of the most useful in the State. It meets annually; the next meeting will be in May, 1905. We cordially invite all physicians of the State to meet with us.

J. M. STALLARD, Sec'y.

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The *Henry County Medical Society* met in the office of Drs. W. L. and J. P. Nuttall, Monday, September 26, 1904. The meeting was called to order by the president, J. C. Casity. Those present were: Drs. O. P. Chapman, R. C. Porter, A. M. Zaring, F. J. Yager, Enos Swain, C. R. Morton, W. L. Nuttall, Capt. Porter, E. A. Gullion, W. T. Coblin and Louis Coblin.

Dr. Louis Coblin presented an original paper on "Typhoid Fever," which was highly complimented by all and generally discussed. A committee was appointed to arrange table of meetings of this society. Dr. Coblin was added to the list for a paper next month.

JOHN P. NUTTALL, JR., Sec'y.

The *Jefferson County Medical Society* held its ninth stated meeting at the Galt House, Louisville, on October 18, 1904, with the following program:

"Anterior Dislocation at the Ankle," by Cuthbert Thompson, M. D., Anchorage.

"Ulcerative Endocarditis," by John G. Cecil, M. D., Louisville.

"Insult to the Viscera During Abdominal Operations," by E. L. Pierce, M. D., Louisville.

"Renal Tuberculosis, with Specimens," by J. Garland Sherrill, M. D., Louisville.

"Suppurating Kidney, with Stone," by L. S. McMurtry, M. D., Louisville.

"Hemorrhagic Typhoid Fever, Report of a Case," by B. F. Zimmerman, M. D., Louisville.

The meeting was well attended.

Dr. James B. Bullitt reported on behalf of the Library Committee that an interview had been had with Mr. Hopkins, librarian of the Louisville Free Public Library. Mr. Hopkins assured the committee that the library had the greatest willingness in the world to provide a good medical library, but that funds for this purpose would be very limited, owing to the fact that the general appropriation for the library is comparatively small and quite inadequate for the general and special purposes of such an institution. He therefore suggested the utility of the physicians of Jefferson county forming some sort of association for the purpose of raising funds for assisting in buying books for a medical department. Dr. Bullitt suggested that physicians having duplicate volumes, or medical books of no service to them at the present time, should donate all of these books to the library, as they are comparatively of no importance on the shelves of the doctors' private libraries and are of great value in making up a complete medical library in a large institution. He suggested that a Library Association should be formed whose business should be to receive subscriptions of books and money for library purposes. He expressed it as his opinion that a number of physicians in the city of Louisville would be glad to contribute \$10.00 per year to such a fund; that many others would contribute \$5.00 per year, and still others would contribute smaller sums, so that each year a substantial sum could be turned into the library for its medical department.

Dr. W. H. Wathen made a motion that a committee of three members be appointed, with Dr. Bullitt as chairman, this committee to confer with committees from the other medical societies in the city of Louisville, for the purpose of carrying out the ideas suggested. After some discussion this motion was carried.

The *Logan County Medical Society* held its regular quarterly meeting on September 5, 1904, and was well attended, as usual. The meeting was called to order by Dr. M. E. Alderson, and the secretary being absent his place was filled by Dr. G. W. Hill.

An especially good paper on "Keratitis" was read by Dr. A. L. Butt and was listened to carefully and discussed freely by those present. Dr. E. F. Brodie reported two very interesting cases of ulcer of the cervix, with successful treatment used therefor. Quite a number of cases of interest were reported and freely discussed by nearly every member present, as our regular program was shorter than we expected, owing to the unavoidable absence of two members who were expected to supply papers.

Our next meeting, December 5, 1904 will be for the election of officers for the ensuing year, and in part for the discussion of fees, their proper collection, etc., and a full attendance is looked for.

J. K. W. PIPER, Sec'y.

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The second annual meeting of the *Southern Kentucky Medical Association* was held at Elkton, Ky., Wednesday and Thursday, October 26-27, 1904.

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At a meeting of the *Warren County Medical Society*, held on October 8, 1904, at Bowling Green, Ky., the following officers were elected for the ensuing year: President, Dr. Jno. H. Blackburn, Bowling Green; Vice-President, Dr. Daniel B. Stone, Hydro; Secretary-Treasurer, Stanley O. Sabel, Bowling Green.

S. O. SABEL, Sec'y.

OHIO VALLEY MEDICAL ASSOCIATION.

The coming meeting of the *Ohio Valley Medical Association*, which is to convene at Evansville, Ind., on November 9-10, 1904, promises to be an interesting one. The Association extends a cordial invitation to the profession at large to attend this meeting.

The program follows:

FIRST DAY—Morning Session.

Cataplasm, Their Use and Abuse, by Dr. T. J. Shoemaker, Morganfield, Ky.
The Therapeutic Uses of Gastric Lavage, by Dr. M. G. Moore, Vincennes, Ind.
The Use of Normal Saline Solutions in Surgery, by Dr. L. G. Bowers, Richmond, Ind.
External Urethrotomy, by Dr. Walker Schell, Terre Haute, Ind.
The Technique and Significance of Blood Examination, by Dr. T. V. Keene, of Indianapolis, Ind.

FIRST DAY—Afternoon Session.

Some of the Difficulties in the Diagnosis of Acute Appendicitis, by Dr. R. E. Fort Nashville, Tenn.
A Paper, by Dr. Mark A. Brown, Cincinnati, Ohio.
A Contraindication of the Pessary, with Practical Demonstrations, by Dr. Palmer Findley, Chicago, Ill.
On the Public Care and Treatment of the Inebriate, by Dr. T. D. Crothers, Hartford, Conn.
The Radical Cure of Hernia, by Dr. August Schachner, Louisville, Ky.
Surgery of the Prostate, by Dr. Joseph R. Eastman, Indianapolis, Ind.
Advances in Gentro Urinary Surgery, by Dr. Wm. R. Blue, Louisville.
Promptly at 5 p. m. a clinic will be held by Dr. B. W. Sippy, Chicago, Ill.
Evening session at Evans Hall, Corner Fifth and Locust streets.
Address by President Dr. A. M. Hayden, Evansville, Ind.
Annual Address, Some Mistaken Views About Doctors, by Dr. Chas. A. L. Reed, Cincinnati, Ohio.

SECOND DAY—Morning Session..

Why Should So Many Consumptives Die?
Is the Family Physician to Blame, by Dr. Paul Jacquain, Asheville, N. C.
Practical Points in Vesical Calculus, by Dr. W. N. Wishard, Indianapolis, Ind.
Malignant Growths of the Eye, by Dr. Adolph Pfingst, Louisville, Ky.
The Successful Treatment of So-Called Insurables by the Physiological Method, by Dr. J. H. Kellogg, Battle Creek, Mich.
Cancer of Rectum, by Dr. George W. Roberts, of New York City.
Chronic Diseases: Some Observations Upon Their Treatment, by Dr. Curran Pope, Louisville, Ky.
Intestinal Obstruction, by Dr. F. F. Lawrence, Columbus, Ohio.
The After-Treatment in Abdominal Operations, by Dr. H. J. Whiteacre.
Fibroid Growth of the Pharynx and Naso Pharynx, by Dr. Wm. Cheatam, Louisville, Ky.
Departures From Conventional Splints, by Dr. H. D. Allen, Indianapolis, Ind.
Report of a Case of Popliteal Aneurism, Treated by Arteriorrhathy, by Dr. H. O. Pantzer, Indianapolis, Ind.
Cholecystites, by Dr. J. L. Wiggins, East St. Louis, Ill.

SECOND DAY—Afternoon Session.

Rationale of Suggestion, by Dr. Brooks F. Bebee, Cincinnati, Ohio.

A Paper, by Dr. M. L. Herdingsfeld, Cincinnati, Ohio.

The Eye, Ear and Throat, Sequela of Diphtheria, by Dr. L. D. Brose, Evansville, Ind.

Cysts of the Mesentery, by Dr. O. G. Pfaff, Indianapolis, Ind.

The Limitations of the X-Ray, by Dr. Thos. L. Butler, Louisville, Ky.

Perforating Wounds of the Abdomen, by Dr. Ludson Worsham, Evansville, Ind.

Lobar Pneumonia, vs. Broncho-Pneumonic Tuberculosis, by Dr. Leon L. Solomon, Louisville, Ky.

KENTUCKY VALLEY MEDICAL ASSOCIATION,

The Nineteenth Semi-Annual Session of the *Kentucky Valley Medical Association* was held at Irvine, Ky., October 6-7, 1904. The meeting was called to order by Dr. G. S. McDonald, Vice-Pres. The meeting was opened by a prayer from Dr. T. P. Gardner; this was followed by the Address of Welcome from Dr. G. A. Embry, of Irvine, Ky., and responded to by Dr. W. F. Waugh, of Chicago, Ill. The minutes of the last session were read and approved. Members present, Drs. C. G. Stephenson, C. S. McDonald, B. Littlepage, F. W. Owen, W. F. Waugh, W. B. McClure, H. H. Stamper, C. D. Mansfield, J. D. Kiser, J. L. Seay, C. Marcum, J. H. Evans, J. R. Reynolds, G. A. Embry, J. S. Turner, R. F. Hood, H. M. Winburn, G. P. Sprague, J. J. Gibson, T. P. Gardner.

Hon. H. Riddell's paper on "Medical Jurisprudence," was read by Hon Judge William Lilly, of Irvine. The chair then appointed a committee of three, (Drs. Evans, McClure and Sprague) to draft resolutions on the death of Dr. Poyntz; also Drs. Seay, Marcum and Mansfield, to draft resolutions on the death of Dr. Bamfield.

Drs. G. A. Embry, R. F. Hood, J. S. Turner and J. F. Scribner were made members of the Association, and Drs. W. F. Waugh and T. P. Gardner, were made honorary members.

Dr. W. B. McClure read a paper for Dr. VanMeter. Dr. W. F. Waugh, of Chicago, read a very interesting paper on "Veratrine." Dr. W. B. McClure read a paper on "Adenoids of Infants." Dr. Barkley's paper on "Abdominal Tumors," was read by Dr. J. H. Evans. Dr. J. R. Reynolds, of Mt. Sterling, read a paper on "Granulated Eyelids." All of these papers were freely discussed. Dr. C. Marcum read a paper on "Summer Diarrhoea."

Dr. A. H. Barkley, of Lexington, was elected President of the Society and Dr. G. S. McDonald, of Beattville, Vice-President. Dr. B. Littlepage, of Clay City, Ky., was re-elected Secretary.

The next meeting will be held at Torrent, Ky., some time in June, 1905, the date to be fixed later.

After singing "The Old Kentucky Home" the meeting adjourned.

B. LITTLEPAGE, Sec'y.

DIPHTHERIA ANTITOXIN IN SCARLET FEVER.

"In regard to Dr. Darlington's routine practice of administering diphtheria antitoxin at the beginning of all cases of scarlet fever, it was interesting to note that in Chittick's two most successful cases the patients had given them, some time after getting the antistreptococcic serum 2,500 units of diphtheria antitoxin, although no Klebs-Loeffler bacilli were found. On the other hand, two cases in which the antitoxin was given first, and later free doses of antistreptococcic serum, did badly; one of them dying, and the other recovering only after a month's illness."

CONGENITAL ANOMALY OF THE HEART IN A PREGNANT WOMAN.

"Ferraro reports a case of a woman who had been suffering from cyanosis from birth, and who died during pregnancy. The autopsy showed the presence of a congenital malformation of the heart (incomplete development of the interventricular septum). The pregnancy without any doubt caused the death of the patient, and her life might have been saved if the gestation had been interrupted in time. The diagnosis of congenital heart disease was very easy in this case."

EXCLUSION OF KIDNEY.

"Gayet and Cavaillon gathered from their experiments that an aseptic ligature of the ureter is well borne; that total ligature of the pedicle gives the most complete atrophy; injection into the kidneys of fatty substances hastens inflammation and subsequent sclerosis, solidifiable substances (paraffin-petrolatum), giving the best results; and Koch's bacillus, after four months' sojourn in an isolated kidney, is still virulent. A great benefit of the operation is to preserve the bladder from infection; besides its uses in sarcoma, pyelonephritis, and renal tuberculosis."

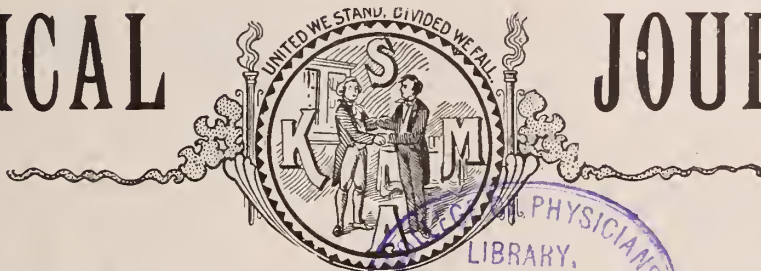
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GRADUATE NURSES' REGISTER.

NAME.	DATE AND PLACE OF GRADUATION.	ADDRESS.	TELEPHONE.
Miss Lucille Allen.....	1901—Good Samaritan Hosp., Cincinnati.	Richmond, Ky.	
Miss S. Tanner Anderson.....	1900—Norton Infirmary, Louisville.	3121 Brook, Louisville.	C 1288
Miss C. E. Abraham.....	1899—Gray Street Infirmary, Louisville.	117 W. St. Catherine, Louisville.	H 1283
Miss Mary A. Alexander.....	1891—Louisville City Hospital.	603 W. Oak, Louisville.	H 192
Miss T. Alloway.....	1903—Louisville City Hospital.	108 E. Broadway, Louisville.	C 490
Miss M. M. Baker.....	1896—Louisville City Hospital.	108 E. Broadway, Louisville.	H 1541
Miss Harriet Balzheiser.....	1901—Woman's Hospital New York.	108 E. Broadway, Louisville.	C 929
Miss Ida Beckman.....	1899—Good Samaritan Hosp., Lexington.	146 South Upper, Lexington, Ky.	H 635
Miss Viola J. Bines.....	1896—Jennie Casseday Infirmary, Louisville.	1828 Baxter Ave., Louisville.	C 8719
Miss May Bell Bowyer.....	1898—Louisville City Hospital.	603 W. Oak, Louisville.	C 490
Miss Gertrude Breslin.....	1896—Louisville City Hospital.	Richmond, Ky.	
Miss Margaret Bridgers.....	1896—Norton Infirmary, Louisville.	421 W. Chestnut, Louisville.	C 1684
Miss Edith Edwards Bush.....	1892—Louisville City Hospital.	1434 Sixth, Louisville.	H 587
Miss L. C. Busch.....	1902—Norton Infirmary, Louisville.	218 E. Broadway, Louisville.	C 512
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Miss M. Cameron.....	1902—Good Samaritan Hosp., Lexington.	Box 217, Lexington, Ky.	H 490
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Miss Katherine Dear.....	1904—University Hospital, Louisville.	Cor. 12th and Ky., Bowling Green, Ky.	C 125
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Miss Lula Frily.....	1904—Norton Infirmary, Louisville.	1223 Second St., Louisville.	South 14919
Miss Lena Fuhrman.....	1900—Good Samaritan Hosp., Lexington.	18 Park Place, Lexington, Ky.	H 705
Miss Ida S. Gardner.....	1896—Louisville City Hospital.	106 E. Kentucky, Louisville.	.661
Miss Jennie Gideon.....	1897—Norton Infirmary, Louisville.	222 E. Broadway, Louisville.	C 1210
Miss Dorothy Foster Gilmore.....	1899—Louisville City Hospital.	121 E. College, Louisville.	
Miss Frances Gilmore.....	1902—Norton Infirmary, Louisville.	216 Bailey Ave., Louisville.	H 5795
Miss Minnie B. Goodell.....	1903—Gray Street Infirmary, Louisville.	216 Bailey Ave., Louisville.	H 5795
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Miss Lizzie R. Hand.....	1898—Good Samaritan Hosp., Lexington.	545 E. Main, Lexington, Ky.	H 1381
Miss Mary L. Harbison.....	1895—Norton Infirmary, Louisville.	2519 W. Market, Louisville.	H 4150
Miss Nancy Harris.....	1898—Louisville City Hospital.	603 W. Oak, Louisville.	C 490
Miss Mary Harris.....	1903—Good Samaritan Hosp., Lexington.	310 W. High, Lexington, Ky.	H 1585
Miss S. Hayden.....	1903—University Hospital, Louisville.	732 Third, Louisville.	H 5262
Miss Nannie Head.....	1900—Good Samaritan Hosp., Lexington.	812 W. Maxwell, Lexington, Ky.	H 824
Miss E. B. Herbert.....	1900—Good Samaritan Hosp., Lexington.	812 W. Maxwell, Lexington, Ky.	H 824
Miss B. M. Hughes.....	1903—University Hospital, Louisville.	732 Third, Louisville.	H 5492
Miss Ida Hulette.....	1896—Good Samaritan Hosp., Lexington.	510 N. Broadway, Lexington, Ky.	H 1002
Miss Lou Hurly.....	1903—Louisville City Hospital.	108 E. Broadway, Louisville.	H 1541
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Miss Maud Pecar.....	1896—Louisville City Hospital.	108 E. Broadway, Louisville.	H 217
Miss Susan Belle Porter.....	1901—Norton Infirmary, Louisville.	1169 Sixth, Louisville.	C 929
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Miss F. G. Relf.....	1892—Norton Infirmary, Louisville.	805 W. Chestnut, Louisville.	H 2182
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Miss E. F. Shawner.....	1891—Kingston Gen'l Hospital, Ontario.	210 W. Oak, Louisville.	C 929
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Miss Julia Z. Watts.....	1901—Good Samaritan Hosp., Lexington.	431 N. Lime, Lexington, Ky.	H 1469
Miss Beatrice Young.....	1903—Norton Infirmary, Louisville.	210 W. Oak, Louisville.	H 2182
Miss Anne C. Gags.....	1901—McMurtry's Infirmary, Louisville.	405 W. Broadway, Louisville.	C 439
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Miss Hulda B. Dinkelspiel.....	1904—Norton Infirmary, Louisville.	222 West Chestnut, Louisville.	C E 208
	1904—Norton Infirmary, Louisville.	107 W. Breckidridge, Louisville.	H 3083
			M 3010
			S 1619a

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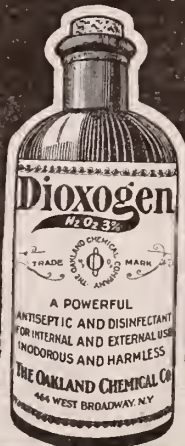
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LOUISVILLE, KY., DECEMBER, 1904.

NO. 7.

THROUGH AND THROUGH GUN SHOT WOUND, WITH PERFORATION OF THE LIVER.*

By W. A. QUINN, M. D., HENDERSON KY.

On Sunday, Oct. 4th, of last fall, George W., a lad of about fifteen years of age, together with several companions, was returning from a jaunt in the woods when a small twenty-two caliber rifle was accidentally discharged, the ball passing entirely through his body perforating the liver. The aperture of entrance was situated about opposite the costal cartilage of the seventh rib, an inch and a half to the left of the median line and making an exit two inches posterior to the axillary line between the eighth and ninth ribs.

The accident happened about noon, and as quickly as the boy could be moved to the hospital and a hurried preparation for operation could be made, I opened the abdomen by a median incision about four inches long in the line between the points of entrance and exit of the ball. The site of the cut was selected in the belief that from the range of the bullet I would encounter a perforation of the stomach. This belief was also strengthened by the statement that the vomited matter contained blood. Later developments proved, however, that both of these suspicions were unfounded. The facts were that the boys had been eating wild grapes which they had found in the woods, and the juices of the grapes had given the vomitus the wine, or blood, color.

The wound in the liver was found about an inch and a half above the lower border of that organ, and its size was surprisingly large—in fact, by stretching the truth and the wound a little bit, two fingers could have been thrust through it. The abdomen was found partially filled with blood, and the wound still bleeding. The wound was completely closed, and the hemorrhage effectually controlled by three through-and-through, or box, sutures of number two VanHorn sterile catgut, introduced with a half curved needle. The clots and blood were washed out thoroughly from the peritoneal cavity with hot saline solution, the cavity being left full of the solution and the external wound closed with a through-and-through, or box, suture of silk worm gut. The patient was put to bed suffer-

ing greatly from shock and loss of blood. The extremities were cold and the pulse thready, but under the vigorous use of strychnia and whiskey administered hypodermically, and hot saline solution given subcutaneously and per rectum, he came around all right and made an uneventful recovery. He left the hospital in two weeks and at the end of four weeks resumed his work at the furniture factory.

This boy went right along enjoying perfect health, never losing a day from illness for five of six months, when he developed an abscess of the brain, from which he died. I was exceedingly anxious for an autopsy and finally after a good deal of persuasion, secured the consent of the family to make one. I was very much interested to know just what changes had taken place in that liver wound, and while my assistants were examining the brain abscess I secured the liver, or part of it, wrapped it up and slipped it in my pocket. I was surprised to find that upon a most careful examination I could scarcely locate the scar. The repair had reached that point of perfection as to almost defy discernment. I present the specimen for your inspection.

The literature on the subject of gun shot wounds of the abdomen with perforation of the viscera is certainly misleading. The text books make them out almost necessarily fatal, while the reports in journals and magazines would indicate that the mortality is almost nil. I am persuaded after a good deal of study that the cases of recovery are those which are operated upon early, and the cases in which the course of the projectile is most fortunate in missing the larger vessels of the viscera.

ACUTE INTESTINAL DISEASES OF SUMMER.*

By D. C. BOWEN, M. D., NOLIN, KY.

When this society requested me by a vote to prepare a paper, to be presented at this meeting, upon "Acute Intestinal Diseases of Summer," I did not realize the magnitude of the subject assigned me, which requires volumes to cover in all of its phases; therefore all your essayist will attempt to do, is to call the attention of this body to some things which he considers of etiological importance, along

* Read before the Kentucky State Medical Association, Lexington, Ky., May 18, 1904.

* Read before the Hardin County Medical Society, July 14, 1904.

with a little of this and that, leaving in the main, the subject for the members to thoroughly cover in their discussion, with an occasional crack at the essayist. The advent of warm weather always brings an increase in the number of cases of digestive disturbance: in most of these cases there is present fermentation of the contents of the alimentary canal, with markedly acid reaction.

So long as an organism is able to maintain the equilibrium of its function, the condition is called health. Mankind are only capable of reacting against a special and very limited environment; therefore the base of health's equilibrium is a relatively narrow one. The human body withstands but limited variation of temperature in the composition of atmosphere. Variations in temperature and humidity, accompanying changes in season are associated with variations in the incidence of certain diseases that are analogous to the incidence of the diseases in relation to climate. During the summer months acute intestinal maladies are prevalent and the tropic diseases make the greatest incursion into the temperate zones. This is due to the fact that all causal conditions are favorable only during these months.

The prevalence of acute intestinal diseases of childhood, such as cholera morbus, cholera infantum and other forms of entero-colitis, is greatest during July and August, a period in which it is most difficult to properly preserve foods used for infant feeding. The body is able to compensate for rises in temperature by increased evaporation of water. The respiration and heart action are hastened and perspiration is increased. The exposure of the body to moderate increase in temperature leads to dilatation of the blood vessels and favors certain forms of infection. Thus "taking cold" expresses an infection often the result of a reduced immunity due to overheating. This leads us up to the question of auto-intoxication, a condition that results when compounds formed by an organism react injuriously against it.

In using these terms we include infection and putrefactive processes, the results of bacterial action within the intestinal canal. It has long been an accepted fact that nine-tenths of the diseases of the human body are due in a greater or less degree to retention of toxins, the presence of waste in the body. The main point of offense is the bowel, where faulty peristalsis and digestion causes the accumulation of a mass of sour and fermenting matter; this in itself may cause mechanical irritation or by its absorbed products in others, and the waste laden human becomes ill.

Van Puteren says that in his bacteriological study of the contents of the stomach in healthy babies, he found that in 18 per cent of the

nursing infants, whose mouths were carefully washed out before feeding, the gastric contents were sterile, a condition that could hardly be present were bacteria essential to the digestive process. Observation of this kind accounts for the continuous warfare with micro-organisms so strategically waged by the leucocytes.

Booker believes that excessive numbers of the colon bacillus and bacillus lactis aerogenes are responsible for the mild diarrhoeas; bacillus proteus vulgaris is responsible for the more severe and chronic forms, while the very serious toxic types are particularly associated with streptococci and other micrococci.

These organisms may be present in large numbers in milk. The milk may contain tubercle bacillus which is associated frequently with the streptococci and staphylococci; particularly is this true if there are tubercular foci and pus formation in the mammary glands. Or it may be contaminated by particles of dirt, manure, epithelial scales or wound secretion from cow's body, from dust in the air or infectious particles on the hands or clothing of the milker.

Ravenel has shown that tuberculous cows may expel bits of mucus containing virulent bacilli when coughing.

Persons affected with pulmonary or nasopharyngeal disease may in coughing, sneezing or even talking contaminate milk.

Flies or other insects may carry contamination; polluted water used in washing the containers or utensils may render the milk infectious. Besides the injurious effects resulting from excessive or deficient eating, food may possess unwholesome qualities from improper selection or age, growth, season or environment, from disease, from decomposition, and from contamination with vegetable and animal parasites.

The danger of contracting parasitic disease is obviated by thorough cooking and careful food inspection.

Decomposition of food may result in the formation of toxic ptomaines, such as the tyrotoxine of milk and cheese.

Affections characterized by vomiting, diarrhoea and collapse and attributed to the ingestion of meat are no doubt due to the bacillus enteritidis of Gartner—which is an organism resembling the colon group.

Intestinal irritation is produced often times by vegetables grown under abnormal circumstances. Food plants are often attacked by fungi, such as ergot of rye and blight of corn. Grave pathological changes may follow the ingestion of such diseased cereals.

Though bacteria are recognized as important causative agents in acute intestinal diseases, it is certain that chemical decomposi-

tion of food is always present, giving rise to an inflammatory state of the alimentary canal.

Heat, bad air, filth and lack of ventilation are potent predisposing influences as well as obstacles to a cure.

The tenement house death rate is very much higher than that of the richer portions of our cities.

Reasoning on these theories, is it not perfectly natural that your essayist call attention first to acute intestinal indigestion, which is known as simple diarrhoea; irritative diarrhoea; mechanical diarrhoea.

Quite a per cent of the population is affected with this disease, but unfortunately we are not consulted concerning them until they have become chronic, or until toxic condition excites alarm.

It is the opinion of the writer that the sooner we teach our clientele that frequent stools are not beneficial during teething, and that such neglect greatly increases infantile mortality, and that prompt treatment of acute intestinal indigestion is second to none, the sooner we will be able to report less fatalities.

Acute milk infection often follows this condition. Holt has observed that cholera infantum "is most frequently engrafted upon a mild dyspeptic diarrhoea." While this is often the case, it has been the writer's experience that the previously healthy child is taken suddenly ill, with symptoms of gastro-intestinal irritation which seems to be produced by the most powerful irritant poisoning. The child being perfectly well, suddenly begins to vomit and purge. The face is palid, the eyes sunken, countenance anxious, and every feature visible is one of anxiety and distress. The vomited matter at first is possibly sour and is soon dejected and then follows the mucus stained with bile which persists. The stools at first contain formed fecal matter, with possibly lumps of undigested food; they become more frequent and watery, gradually becoming more and more sanguineous till at last they may be composed entirely of bloody serum.

The odor is peculiar and is very characteristic of this disease. The emaciation is rapid, the tissue waste is second to none save probably that of Asiatic cholera, the skin is cool and clammy, the urine is scanty or there may be suppression, the abdomen is not distended but is retracted, the fontanelle is depressed and usually pulsating. When the poison is extremely virulent the child lies in a stupor with eyelids half closed and the globe covered with a film. Temperature runs high, usually from 102 to 107, or we may have a subnormal temperature; the pulse is weak and rapid, respiration irregular and hurried; the child has a cry from the very first that is peculiar to the disease, which is gradually followed by

moans and eventually a comatose state; this may be preceded by restlessness or convulsions; thirst is great and the patient takes liquid with an avidity which is followed by vomiting.

Diagnosis is easy and when one has observed a single case the symptoms are so characteristic that he will never forget them and is not liable to associate them with any other disease unless it be Asiatic cholera.

The prognosis is very grave indeed, and we should be on our guard lest we give unwarranted hope to anxious parents and friends when vomiting and purgation have ceased, which is often a warning that death will very soon close the scene.

The preventive treatment is the ideal one; withhold such food as may increase fermentation or be a medium for the growth and multiplication of bacteria, and as tyrotoxinon is the particular poison that produces choleric form diarrhoea, milk and all manufactured foods that contain milk should be withheld; clear the alimentary canal by castor oil (*Oleum Ricini*), follow this with Hyd. Chl. Mit. 1-10 gr., repeat every two or three hours till the glandular system has been stimulated, and, as we now resort to other food than milk, such as barley water and other amylaceous food, we know of no remedy that does quite so much good as taka-diasase, administered in 1-2 to 1 gr. dose immediately after each feeding, as it is quickest in converting starch into sugar.

Unfortunately we do not see these cases until they are in the throes of death and require as prompt treatment as if they had swallowed a poisonous dose of arsenic, for indeed we have to deal with an acute irritant poisoning.

Now as you wish to know what the essayist does in these cases he will give you in a general way the things he has found to serve him best in the management and treatment of cholera infantum:

The first and most logical thing he does is to discontinue the administration of the poison by leaving off all food, is the decomposition of same may result in the formation of toxic ptomains such as the tyrotoxinon of milk, etc.

The writer is well aware how difficult it is to do this as the "Grannie" puts in her appearance about this time, and insists (even in the presence of the physician) that she can arrest vomiting in three minutes by giving one drop of fresh blood from the head of a chicken, which is killed, at this particular time, for this noble purpose, or that she can control the diarrhoea in an hour by giving a decoction of dewberry briar root, and if the doctor's back is turned she persists in giving the patient just any old thing she may fancy will do the work.

To obviate this we select one of the most conscientious women in the neighborhood who will carry out directions to the letter. To get rid of the poison, already in the alimentary canal, we proceed immediately to wash out the stomach, either by lavage or by getting the child to drink all the water possible, using sterilized water, if symptoms will allow the time to boil and cool. In washing out the stomach we find this instrument an ideal one, which you will see consists of a glass funnel, about three feet of rubber tubing, connecting glass tube and a soft rubber catheter. If you happen not to have an instrument of this kind you can soon improvise one by attaching a fountain syringe tube to a catheter by means of a piece of pipe stem or elder with pith removed, which serves the purpose well.

Next we flush the colon, either through the colon tube or with the fountain syringe, using as much as a half gallon or more of sterilized water, which we cause to be retained as long as necessary to soften the contents of intestines, by pressing a napkin against anus; after causing the retention of water as long as desired, allow the water to pass; we now resume the flushing so long as the return flow contains any foreign matter, or till the colon is thoroughly cleansed, after which we use normal salt solution or some disinfectant, such as 50 per cent solution of euthymol, glyco-thymol or listerine, repeat every four hours as necessary or when vomiting and purging returns.

Lavage of the stomach and bowels do not exhaust patients half so much as vomiting and purging, and are many many times more effective.

Some authors recommend irrigations of 30 grs. tannic acid to the pint of cool water to render the soluble proteids inert, after the first washing; a procedure which we have long since discontinued, on the grounds that if masses of caseine, which contain proteids, remain in the bowels, no good is expected from this agent, as it is impossible to precipitate proteids in mass by tannic acid. But on the other hand, the euthymol, glyco-thymol, or listerine, by its antiseptic, disinfecting and deoderant effects upon the bacteria in the large intestines may become inert by colonic flushing with these agents.

Immediately after the first lavage of stomach we are in the habit of giving a dose of calomel for its anti-fermentative effect on the small intestines, which we are unable to reach by our antiseptic irrigation. After the vomiting has been controlled, we give stimulants by the mouth (whiskey preferred), which is given in sterile water, ice cold being the best.

At this stage we have found that Holt's dose of 1-100 gr. Morphia and 1-800 gr. Sul.

Atrophia, administered hypodermatically, is one of the drugs that are most potent of good. If the temperature is very high, we find that the ice pack to the forehead is very acceptable and favorably affects vomiting. The sponging and friction of the surface are our sole agents to control the temperature.

We forbid the administration of any food whatever for 24 to 36 hours. Then we begin nourishing with the white of fresh egg, beaten with three ounces of ice cold water sufficient to break up well, but short of foaming; sweeten merely to taste and flavor with whiskey, serve a tablespoonful at a time, to be repeated every hour or two, and discontinue if it provokes vomiting.

We forbid the use of milk for several days. We direct that the hands of nurse be disinfected every time she removes the diaper and that all clothes and clothing soiled by vomited or purgative matter be removed at once and placed in an antiseptic solution.

The room should be kept quiet, well ventilated, avoiding direct draughts of air, and at as near one temperature as possible, say 68 to 70 degrees F., which is very hard to do in extremely warm weather. And if you fail in approximating this temperature you will find Strickler's method of placing patient in a clean cellar during the day to add greatly to the comfort of the patient, and greatly increase the chances of recovery.

Some other acute intestinal diseases, particularly interesting at this time, are acute entero-colitis, which may be classified according to the anatomical portion of intestine affected.

As our essayist has consumed more of your time than he expected, he begs your pardon and leaves this part of his subject for the deliberation of his fellows.

SURGERY IN COUNTRY PRACTICE, WITH REPORT OF A CASE OF FRACTURE OF SKULL WITH LOSS OF BRAIN SUB- STANCE.*

By A. M. CRITTENDEN, M. D., FERGUSON, KY.

We all appreciate the advantages of hospital work with the facilities for asepsis, and acknowledge the benefits to surgery through such thorough methods, but nature can do as much, if not more. After all, it seems as though good health is our strongest ally in resisting infection. What can be done away from the hospital in the absence of the trained nurse and other facilities, under the most try-

*Read at the meeting of the Logan County Medical Society, December 7, 1903.

ing circumstances, is shown by the result in the following case:

I was called hastily at night on April 30, 1899, to see H. M. White, aet. 36; occupation farm laborer; weight 160 pounds; good constitution; good family history; married. The patient in a fight had received several ugly wounds on his head and one on his left shoulder, made by a heavy new axe handle wielded by a powerful opponent. I found him in a little cabin, in bed, the bedclothes soiled from a week's use, by the unwashed farm-hand. Some neighbors were bathing his head with ice water from the family wash tub (none too clean) to check the hemorrhage which was profuse. The patient was rational, the pupils were dilated but equal and there was frequent vomiting.

After sterilizing my hands I found on examination, a wound just above the occipital protuberance two and three-fourths inches long, extending through the tissues of the scalp and exposing the bone; another wound above the right frontal eminence, one and three-fourths of an inch long exposing the skull. At the vertex there was a large wound six inches in length, extending from the sagittal suture obliquely forward and toward, or in line of the left eye. Near the coronal suture to the left of head, was a wound, made it seemed by the square corner of the axe handle. There was a contused wound of left shoulder on its posterior aspect. Fracture was detected in the skull in both the long wound and the one near the coronal suture, and from this one brain substance was oozing pretty freely and had escaped where the fight occurred.

Having dispatched a messenger for assistance, instruments, etc., I ordered water sterilized and organized a hunt amongst the neighbors for bandage material.

While waiting for Dr. J. R. Crittenden to come to my assistance and the return of the messenger, I shaved the entire head, which was quite a job in itself. I was working by lamp light which attracted a myriad of candle flies, several of which were continuously fluttering across the field of operation, and the patient frequently calling a halt in order to vomit. When the scalp had been shaven and the wounds had been cleansed it was seen that brain substance was oozing very freely, and witnesses stated that a large quantity was noticed soon after he was struck.

Soon after Dr. J. R. Crittenden arrived the patient was anaesthetized with chloroform. The bridge of tissue between the long oblique wound on the vertex and the small one made by the corner of the axe handle was divided, making an irregular wound nearly eight inches long. We found on turning back the flap thus formed, that the skull was crushed as if

it had been an eggshell. In the track of the long wound it was cut out as by a punch and depressed. The loose fragments were removed first, after which the large pieces were removed and the depressed portion raised into position with elevator. One large piece had pierced the dura-mater to the extent of an inch. The application of hot water on dossils of lint controlled all bleeding points not clamped in hemostats, except where the larger fragment pierced the dura mater to the extent of an inch. This point was evidently arterial, but the bleeding vessel could not be reached without removal of more bone, which was not deemed advisable on account of the patient's condition. It was decided to pack the wound with gauze to control this hemorrhage. After the control of the hemorrhage it was seen that the dura mater was torn in several places but no effort was made to close the rents by suture. Strands of silkworm gut were used to secure drainage, and the wounds closed with silkworm gut sutures, leaving a space of about one and a half inches unclosed where brain was punctured. The wounds were dusted with a powder of equal parts of iodoform and acetanilide and an iodoform gauze dressing was applied.

The bandages were applied very snugly to control hemorrhage. Morphine Sulp. 1-8 gr. doses, was ordered every three hours until rest was secured, but finding that the patient's wife could not or would not give the morphine as directed, I substituted potassium bromide in 5 grain doses, with no other drugs, except an occasional purge of calomel and salines.

The wound healed kindly by first intention and the sutures were removed on the fifth or sixth day, except in the vicinity of worm gut drains. The wound drained a serous fluid for ten days, the first half of which was mixed with brain matter. As a result of the injury patient had a complete right hemiplegia for fifteen or twenty days.

About May 20, the patient got up in the night and fell, striking his head against a bed-post and reopening a portion of the wound, which required dressing for several days. The paralysis gradually disappeared, the improvement beginning in the face, then in the arm and leg. In October of the same year he had recovered sufficiently to be able to do manual labor of a severe kind.

That such favorable results should be due to the antiseptic and aseptic treatment alone is not claimed, for such conditions and surroundings were such that these factors could not be carried out fully, but that the patient's good health offered the necessary resistance to infection. The removal of irritation and drain-

age of bruised and lacerated tissue were the indications in the treatment. The brain substance lost was estimated at two or three ounces.

THE HISTORY OF THE FORMATION OF RENAL CALCULI.*

By O. L. CONRAD, M. D., WILSONVILLE, KY.

Observation has prompted me to write this history as it has been actually noticed for the past two years.

The beginning of this history goes back over a period of thirty-five years and points to a boy of thirteen years of age who contracted a cold which settled in his right side. He could not pass water without great difficulty.

The physician who attended the case diagnosed it a congested kidney due to cold, and in ten days' treatment pronounced the case entirely cured, as the organs were in normal condition. He never suffered any more or noticed anything wrong until he was twenty years old, when a small calculus was passed about the size and shape of an orange seed, this being the result of an attack of renal colic. The patient continued to suffer and pass these stones until two years ago, when he was taken down with excruciating pain in the right side lasting six weeks. Besides pain his temperature ranged between 99 and 102 degrees. The treatment was diuretic, hypodermic injections of morphia and hot applications over right kidney and side. There was swelling and redness over the right side extending as far around as the liver. With the continued use of hot applications it looked as though the abscess was coming to a head and would rupture without, but nature procured perhaps a better course as it ruptured through the bladder during the seventh week, and in a short time all redness and swelling had entirely disappeared. During four months pure corruption passed by bladder and at times as much as a pint.

The patient became greatly emaciated, color yellow and night sweats most all the time due to absorption of pus. The heart became weak, pulse very irregular, and sympathetic heart trouble.

After all redness and swelling had disappeared and pains ceased and in fact, all bad symptoms overcome, the patient began to do nicely except in one particular. When lying down he would complain of something sticking him in his back. This no one could account for.

Thinking himself as well as could be expected, though at times passing pus, he went

away to stay about nine months. While away I heard from him often, as his old disease would trouble him greatly at times, causing him to gradually grow weaker. Three months after he left I received a letter from his physician saying that he was dying, and before I could get to him the worst had come.

After conducting his remains to Shelbyville, where he was to be buried, the physicians there, who had seen and been interested in this case, desired to hold a post mortem, as they all had differed as to his disease.

On opening the chest and abdominal cavity and finding all the organs in a normal condition we turned our attention to the kidneys. On the right side was found a large pus sac which contained a quart of pus. After sponging this out thoroughly and tracing the direction and extent of sac it was found that it had adhered not only to the liver and bowels, but also to the bladder, where could be outlined an artificial channel through which the pus had passed to the bladder, the old ureter being entirely destroyed. On further exploration a small piece of kidney was found and also something hard, which proved to be a small stone. On going deeper down our demonstrator remarked that he had found a rock, and true, it was a stone of nine drachms, much to the surprise of all.

The formation of kidney stones, and especially these, is due to a nucleus of mucus, or a blood clot, in a congested kidney on which deposits are made. These present a chalky or earthy appearance and are phosphatic calculi. The horns or projections which this large calculus has are molded by the calyces of the kidneys.

CACTUS GRANDIFLORA IN CARDIAC DERANGEMENTS.*

By S. L. REED, M. D., WILSONVILLE, KY.

Cactus Grandiflora (now *Cereus Grandiflora*) was first brought into notice by Dr. Rubini. It is a native of the West Indies and tropical America and blooms in August. The flowers which are from 8 to 10 inches in diameter and have stamens two or more inches in length are fragrant and very beautiful, blooming only at night. The branching green stems of the plant usually have four to five angles and are beset with clusters of five or six sharp radiating needles. Both the flower and the stem of the true *Cereus Grandiflora* possess therapeutic value in as much as the active principle Cactina is resident in both. The physiological action of this principle has been studied by Dr. O. M. Mayer, (New York Med.

* Read before the Spencer County Medical Society. October 20, 1903.

* Read before the meeting of the Spencer County Medical Society, October 20, 1903.

Jour.) and several reasearchers, who found it possessed a decided stimulating action on the heart, arterial tension and the spinal motor centers. Much of the contradictory testimony in regard to the therapeutic action of this valuable plant is generally due to the carelessness of the collector. It is only too often the case that some other member of the large family of Cactaceae has been used. The Bonplandi and even several Opuntias (either carelessly or maliciously, as the case may be) are employed as *Cereus Grandiflora* and these do not possess this cardiac action. Therapeutically, it is a gentle cardiac stimulant of peculiar action. It does not affect the stomach and centers as digitalis does. It increases blood pressure by strengthening the heart beat through its direct action upon the nerves and therefore is especially indicated in Aortic regurgitation where, as is well known, digitalis cannot be used, and also in all functional derangements of the heart connected with anemia, neurasthenia, dyspepsia, tobacco poisoning, sexual exhaustion, in low fevers, and in pseudo angina.

A tincture is prepared of the strength of strong alcohol, the maximum dose of which is two ounces of the fresh flowers to one pint of thirty mimims every four hours. This valuable plant receives but scant notice from our writers on therapeutics, and when noticed, the writings give the general practitioner no idea of its value. Experience has taught me more about this than all I have read. I have been reasonably successful in using it in the form of tincture and fl. extract, but it is most conveniently administered in pill form. I have adopted that way. In order to secure the best I have at one time and another used all of the different formulae offered by the different manufacturers, and have found that offered by the Sultan Drug Co., to be the best for general use. I have administered this drug in many ways, immediately before and after meals, midway between each meal, etc., and find that I get the best effect on a comparatively empty stomach, although if necessary I give it on a full stomach but increase the dose. By illustration I propose giving you the history of a case that had the most irritable heart that I have ever encountered. The heart symptoms in this case overshadowing all other, my attention was called to it on that account, as the patient supposed he was threatened with sudden death. His family history was bad; one brother in an insane asylum, the rest of the family peculiar. Present condition bad, much emaciated, fretful, peevish, easily irritated, had violent attacks of palpitation on the least excitement, or noise, such as a loud laugh or unexpected opening of

a door. Appetite poor, digestion bad, bowels constipated, urine scanty and high colored.

As I propose this paper to only give the effect of *Cereus Grandiflora* will say in a general way that the other symptoms received due consideration. When first seen, patient was confined to his bed, having twelve to fifteen attacks of palpitation in the twenty-four hours. Prescribed Cactina Pillets, one every hour while awake, and during attacks one every fifteen minutes until relieved. Within thirty-six hours the effect could be plainly perceived; patient was then ready to accept the suggestion that he would not die of heart failure. Once you secure the confidence of a patient the rest is easy sailing. In ten days the heart attacks were entirely relieved, and at this writing, six weeks later, the patient is taking no medicine whatever and is ready to go to work. I prefer the Cactina Pillets on account of their solubility and quick action, you get the full effect of the drug within fifteen minutes after administration. Then again this drug has no cumulative action, and may be continued indefinitely. In my hands it has had no effect on the digestive apparatus.

NEURASTHENIA.*

By J. C. CASSITY, M. D., EMINENCE, KY.

"Neurasthenia is a chronic functional nervous disorder which is characterized by an excessive nervous weakness and nervous irritability, so that the patient is exhausted by slight causes and reacts morbidly to slight irritations."

That neurasthenia is more prevalent now that it has been in former years is borne out by statistics and by our own personal experiences. There are several reasons for the prevalence now, and some of them are as follows:

The tendency of people to city rather than rural life is perhaps one of the strongest points in favor of the view, since we know that in our city population is where neurasthenia breeds best.

A larger portion of the people now also use their brains in the struggle for existence and live upon a higher mental plane, with all the danger which that implies.

Luxurious living and sedentary life also add to the list of neurasthenics. This disease exists more frequently among the highly cultured classes. There are some cases recorded among the negroes, but rare according to the population, while hysteria and insanity are fairly common.

Authors say that neurasthenia prevails

* Read before the Henry County Medical Society, August 29, 1904.

mostly in dry temperate climates. They also say that it is found more often in males than in females, but in my limited experience I have seen it as often in one as in the other. Hereditary influence plays a considerable part in the development of neurasthenia. We can usually find that there is a history of severe headaches or nervous irritability upon one side or the other. There is often a history of rheumatism, gout or tuberculosis. The exciting causes of neurasthenia may be classed under the head of excessive mental strain or shock, sexual abuse or the influence of exhausting fevers or of chronic infectious diseases, like syphilis and poisoning from alcohol, etc.

In some cases with men the trouble is brought on by overwork in school combined with neglect of sleep, carelessness in diet, etc.

Dana sums up the leading causes in neurasthenia as follows:

1. Hereditary nerve sensitiveness.
2. Overwork and worry.
3. Severe shock with or without injury.
4. Abuse of stimulants and narcotics.
5. Infections.
6. Abuse of sexual functions.
7. Abuse of digestive functions.

SYMPTOMS—The symptoms of neurasthenia have a pretty distinct general resemblance to each other. As a rule the patient complains of a general feeling of mental depression. Life is not as interesting to him as it formerly was. The man who was once delighted with work can hardly force himself to go to it now, he tires very quickly over tasks which formerly were easily performed. He loses his power of originating plans and of mapping out work. He can not pursue a train of thoughts on a single line of work for any length of time, but sits idly with his mind wandering and gives up in despair.

I have a patient exactly of this kind now. It will take him two hours to decide whether to turn his driving horse out in the pasture at night or to keep him in stable, he will stand and hold him by the halter for that length of time without making a decision. He will send his hands to do a piece of work and perhaps before they reach the work he will have changed his mind and want them to do something else.

Patients with this disease are easily irritated by things which formerly gave no annoyance. He is oppressed by the fear that he will never get well and that he will become insane or there will be some dreadful termination of the present malady. He does not sleep well, will frequently sleep an hour or two during the first part of the night, and will lie awake and toss and wear himself out the rest of the night, or if he sleeps the

greater part of the night he will get up in the morning as tired and unrefreshed as ever.

He suffers or complains of peculiar restrictions or fullness about the head or back of the neck and will sometimes (especially if constipated) complain as if every thing had stopped working and would feel that if he did not get relief at once he would die; then if given something to cause the bowel to move rather freely he would think if they were not checked immediately there would be fatal results.

He has a peculiar parasthesia of hands and arms or legs; they feel numb or asleep at times. As a rule the special senses are not seriously affected. The patient will often see quite well but the eyes soon tire. Examination of the eyes will frequently show the existence of refractive error, more often astigmatism. They frequently complain of defect in visual memory. They see a thing or face but do not remember them as readily as they used to.

The general muscular and nervous strength is lessened and although the patient may not have lost flesh and may not be particularly weak, he tires quickly on ordinary exertion. The reflexes are usually exaggerated.

The digestion of neurasthenics is often more or less impaired and a great many times they are treated altogether for the stomach conditions. It is not usual, however, to find serious cases of gastric trouble with this disease. In the majority of cases when this is a complication, under proper treatment and diet the stomach trouble will disappear but the nervous condition continues.

DIAGNOSIS—The following conditions in some respect resemble neurasthenia: hysteria, hypochondriasis, melancholia and the beginning stage of paresis. Neurasthenia may be differentiated from hysteria in that the latter has a periodical crisis and does not take on any of the classical symptoms of the former. The patient has good appetite, sleeps well, and does not have the characteristic parasthesia and cephalic sensations.

He is alert with active mind and often cheerful, gay and strong, while in neurasthenia he is generally serious and depressed and greatly concerned about his condition.

In hypochondriasis he usually suffers from an entire mental malady, he is usually strong and able to do physical labor, still he who suffers from neurasthenia may after some time take on some of the hypochondriacal symptoms. Melancholia symptoms are harder to separate from neurasthenia than any of the others. The delusions and suicidal ideas, however, enable one to distinguish melancholia.

PROGNOSIS—Neurasthenia is a chronic disease which comes on gradually as a rule, still it may appear suddenly after a shock or

may rapidly develop after an attack of fever. Its course is varying, running from one to seven or eight years. Complete restoration to health is possible.

TREATMENT—Here is where the rub comes. Here is where the physician's patience and the patient's patience are frequently exhausted. We have almost as many different kinds of treatment as we have patients, because no two are exactly alike and the majority are wholly unlike.

But we know the main problem with which we have to contend is *rest*, and in my experience I have found it about the most difficult problem I have ever tackled. Now in obtaining rest of course we do not mean as much the physical as the mental rest. If we can find some means whereby we can get the patient's mind off his work and off his own condition we have succeeded beautifully. Change of scenery is sometimes beneficial, but traveling is not of any advantage. The patient should go to some special place and remain there. Sometimes camp life with cheerful companions is an advantage. Sometimes they are benefitted at some of the sanatoriums where they are supplied with various forms of electricity, hydrotherapy and massage. Physical exercise such as horse back and bicycle riding are beneficial. Walking unless with a cheerful companion to keep his mind employed, is not of much benefit, because the patient is apt to keep his illness on his mind during the walk.

The drugs of most value are the bromides, nux vomica, mineral acids, iron, valerian, asafoetida, sumbul and the saline laxatives. The physician should seek to obtain the full confidence of the patient in order that his suggestions and orders should be carried out punctually.

TUBERCULOSIS OF THE KIDNEY.*

By J. GARLAND SHERRILL, M. D., LOUISVILLE, KY.

This is a subject worthy of more consideration than has generally been accorded it, and the condition is one which is likely to be overlooked for long periods when great benefit could result from proper treatment. My attention has been called to it more directly by a case which came under my observation during the past year.

It has been claimed that renal tuberculosis occurs in two per cent, of all tuberculosis patients, and while many of these are inoperable there still remains a considerable number in which no other lesion can be located save that in one kidney.

Mr. Henry Morris gives a most complete description of the subject in his work on "The Surgery of the Kidney and Ureter." Dr. Hunner, E. J. Ill and others in this country have added to our knowledge of this subject.

The essential cause, the bacillus tuberculosis, gaining entrance into the circulation through the respiratory or alimentary tracts, with or without the involvement of a lymph gland, is transported to the kidney by the blood and, becoming localized there, may cause a general tuberculosis. That the kidney escapes the disease in many cases is well established by Kahlden and others, while the lower urinary tract becomes involved from the presence of bacteria in the urine. In addition to infection through the circulation there is undoubted evidence of ascending infection of the kidney from a diseased bladder, ureter or testis. Again, the possibility of infection of the kidney in the course of a Pott's disease by contiguity, must not be overlooked. Morris mentions a case recorded by Newman in which a tuberculous empyema perforated the diaphragm and gave rise to secondary renal infection.

An intestinal or peritoneal tuberculosis might also excite renal tuberculosis by contact. Such external infection must be rare, as pointed out by Tilden Brown.

Hunner gives the proportion of circulatory infection as much larger than the ascending infection from the bladder. He says: "With the widest margin in favor of primary bladder infection I have classed but five of the thirty-five cases under this heading." Israel gives the proportion as eight in thirty cases. Hunner points out that ascending infection is probably more frequent in males.

The same conditions which favor the development of tuberculosis in any part of the body are equally active here. Trauma, exposure, interference with urinary outflow, are all predisposing causes. Gonorrhoea, by favoring bladder and genital tuberculosis, is perhaps of importance.

Any age is susceptible to this form of the disease. Morris states that the miliary type is seen most often in the young. Hunner gives the greatest proportion between twenty and thirty years. He also states that all of the thirty-five cases reported were in white women, while one-fifth of the patients treated in Johns Hopkins Hospital are colored. Statistics given by different writers differ as to the sex most frequently affected. English writers give men as most frequently attacked, while French authors say that women suffer two or three times as often. This discrepancy is perhaps due to the fact that the writers

* Read before the Jefferson County Medical Society October 18, 1904.

are giving their own experience and their work is confined largely to one sex.

Both kidneys are affected in two-thirds of the cases where a general tuberculosis coexists, while, where the lesion is limited to the kidneys, only one is involved in the larger number of instances. The kidney, in the majority of cases, is affected prior to the involvement of the bladder, although the latter organ and the ureter are sooner or later involved. Morris claims that it is not difficult generally to tell the mode of infection when examining a tuberculous kidney after removal. "When by the blood, military tubercles are found in the cortical substance; the caseous nodules are older, and wider about the bases of the pyramids than at the apices; and if they are broken down, and have opened into the calyces, the opening of the vomicae are small, even though the parenchyma be entirely destroyed. Moreover, there may be little or no extension of the diseased process into the renal pelvis or the ureter. When the disease is of the ascending type the ureter and renal pelvis are indurated, thickened and perhaps ulcerated, with a quantity of cheesy material in their walls or in their lumen. The calyces share in these changes; the connective tissue and urinary tubes become invaded from below upwards; the vessels become obliterated, minute hemorrhages occur into the tissue, and the breaking down process spreads along the pyramids from apices to bases until large vomicae are formed in the kidney which communicate with the renal pelvis by large openings."

The bacilli of tuberculosis may be deposited here at one or at many different points, the product of their presence differing in nothing from similar lesions in other tissues.

Kidneys presenting the miliary nodules are not as amenable to surgical treatment as those with a limited number of caseous deposits, because the latter are most often found in localized disease of one kidney and are less rapid in their course. The process is essentially a slow one and may continue for years before the destruction of the kidney tissue is complete. The presence of a mixed infection is likely to render the destruction of tissue more rapid. The bacillus coli communis, and the streptococcus are the bacteria most often present, but in the larger number of cases cultures are free of mixed infection (Hunner). Localized portions of kidney tissue may be destroyed or the entire organ become a cheesy, suppurating mass. Hydronephrosis may develop as the result of obstruction of the ureter from thickening and infiltration. The tuberculous process may be checked in the early stages and repair is possible by cicatrization, or by the nodule becoming encysted,

but this is not the usual result. As the disease progresses the functioning tissue of the kidney is encroached upon more and more until finally it may be entirely destroyed. In some cases the kidney is able to separate the watery elements from the blood while there is very little urea eliminated. The other kidney is likely to become involved in time, although the authorities are agreed that this may be a late occurrence. When the ureteral orifice is involved a marked thickening and pouting can be noted in the bladder.

Lazarus, Riverius and Fernelius (*Morris, Surg. Dis. Kid & Ureter*, P. 380) have recorded cases of gastro-renal fistula. Morris says that there is uncertainty as to the accuracy of diagnosis in these cases, but records one case, verified by post mortem, in which a fistula from the kidney communicated with the left end of the greater curvature of the stomach. Cases of openings into the duodenum, colon and other portions of the intestines, as well as into the lung, are on record.

SYMPTOMS—The onset of the disease is very insidious in the majority of cases, an exception being the sudden onset of pain in a previously healthy patient, probably due to obstruction of the rigid ureter by clots of blood, or cheesy material. There is pain in the back varying from slight soreness to severe backache, sometimes radiating down the side towards the bladder and not much influenced by motion. Painful and frequent urination is often the cause of complaint, even, as Hunner says, in the absence of bladder involvement. Sometimes the vesical irritation is very distressing. An increased amount of urine may be passed early in the disease with a diminished quantity later. Morris claims that polyuria in a frail patient of tuberculous family, for which no other cause is assignable, should excite suspicion of renal tuberculosis.

Haematuria is often one of the early symptoms of the disease and in most cases blood can be found at some time in the urine. The blood is usually equally diffused throughout the urine, which is acid in reaction, but at times the hemorrhage is severe and persistent. Cases are recorded in which clots have almost filled the bladder.

Pyuria is present in every case, at least dead cells can be found which are identical with pus cells. Albumen is always present when the infundibulum and ureter are involved. Casts are not of necessity present, but were noted in ten per cent. of the cases in Hunner's report.

The size of the kidney varies, sometimes being normal and again greatly increased in size. The presence of peri-renal inflammation

is likely to give the impression of a tumor.

The presence of bacilli in the urine is important but, as their detection is very difficult, failure to find them does not imply absence of disease. Hunner advises daily examination for bacteria rather than repeated examinations on one day. He also claims that the differential stain should always be used. Tubercle bacilli were present in fifteen of twenty-two of his cases in which a note was made.

Morris does not attach much importance to the tuberculin test, while Hunner considers it of value in cases free of fever. The general symptoms are those of tuberculosis anywhere—evening rise of temperature, loss of flesh, anorexia, pallor of skin, night sweats and perhaps oedema of the feet. Later, symptoms of hectic may be present.

The diagnosis is to be made by the history, general appearance of the patient, pain, less severe than that of stone, and coming on slowly dysuria, polyuria, haematuria, pyuria in acid urine, and the presence of albumen. A tumor, when present, and a tender ureter are valuable signs. The presence of the bacillus, and in its absence a positive result from inoculation of a guinea pig with the urine, will be conclusive. Cystoscopy is given prominence in diagnosis by Hunner, but it can only be of value in determining whether both ureters are similarly involved, as shown by the changes at their orifices. The kidney may be diseased and the ureter normal, or the kidney normal and the ureter involved.

Before an attack is made upon the kidney all the means at hand should be employed to determine not only the presence or absence of disease in the other kidney, but its functioning power as well. In some cases it is impossible to determine positively this point. Morris says that examination of urine while the ureter of one side is blocked, as shown by colic, is of value when such a condition presents. Catheterization of the ureters in expert hands is of great value at times, but it has many objections and cannot always be successfully accomplished. It is doubtful also if we are justified in attempting to catheterize the healthy ureter in the presence of unilateral tubercular ureteritis. Cryoscopy of separate urine may prove valuable in determining renal efficiency.

PROGNOSIS—Usually the prognosis is quite unfavorable. The gravity is increased when both kidneys are involved and when occurring in the course of general tuberculosis. Primary and unilateral disease is more hopeful than where the condition is secondary. The appearance of other foci of tuberculosis increases the danger of life. While usually progressing to an unfavorable termination the

course is often very slow; sometimes years elapse before the fatal issue.

Recovery without operation is possible, but of infrequent occurrence. E. J. Ill reports, (*Annals of Surgery*, October 1903, Vol. 38, P. 524), several cases of apparent recovery. Morris says that "certain well marked cases of renal tuberculosis have been temporarily or permanently benefited, and some actually cured, by a change of residence, a suitable climate and under suitable hygienic and dietetic regime." The mortality of operation has been lowered from forty per cent given by Gross in 1885, to seven per cent, by Tilden Brown in 1898, and to three per cent, in 1903, by Kelley. The general mortality will of necessity be considerably higher.

TREATMENT—Treatment should be conducted upon the general plan in use for tuberculosis of any part of the body, viz: good food, fresh air, suitable climate, creosote, cod liver oil and some of the various tissue builders. Especially important is the use of warm clothing and protection of the kidneys from cold. In addition to this the removal of the source of infection is indicated when feasible.

The ideal operation for tuberculosis of the kidney is nephrectomy when there is reason to believe there is no disease of the other organ. When hemorrhage is very free and endangering life it becomes a necessity. When the ureter is extensively involved, as shown by thickening and induration, it should be removed partially or in toto. In the presence of hectic when both kidneys are involved a nephrotomy upon the poorer kidney often proves of benefit as a palliative measure. It is also of value where the radical operation would probably prove fatal, and when the disease is distinctly localized a cure may be accomplished by free incision and erosion of the focus. A partial nephrectomy is indicated in some cases in which the organ is involved in the upper or lower segment.

Albarran has recommended that incision of the kidney be made prior to its removal, first surrounding it with gauze to protect adjacent tissues. This appears to be a very rational proceeding and conducive to the best conservatism. Kelly and others have removed portions of the bladder with the kidney and ureter, successfully. This is the ideal procedure for such conditions, yet there are so many cases recorded where the bladder involvement has been relieved after nephrectomy and nephro-ureterectomy that we are justified in leaving the bladder for a time to see if the symptoms will not subside.

Following any of these operations drainage is of value. Considerable attention should be paid to the function of the remaining kid-

ney, and the skin should be called to its assistance during the early period of convalescence by the use of heat to the body, diaphoretic drugs and the administration of large quantities of water.

Mrs. B., Ekron, Ky., W. 39. Nullipara, came to me November 27, 1903, giving the following history:

Twelve years ago she was operated upon by Dr. Vance for disease of the knee joint, making a good recovery with stiff limb. Health fairly good until present trouble began. Four years ago in the spring she went to bed suffering with her right side. The exact nature of this trouble she could not state, but she had pain and soreness in right side and back.

October 25, 1900, she was operated upon for this trouble and a considerable quantity of pus evacuated. A fecal fistula has persisted since her recovery. Within the past few months an opening has appeared near Poupart's ligament, which discharges pus constantly. No feces escapes from it. She has had no cough or night sweats, only now and then slight fever. Examination reveals a fecal fistula of moderate size on right side of the abdomen about half way between the rib margin and Poupart's ligament, and just external to the linea semilunaris. The mucous membrane is slightly protruding but healthy. A suppurating sinus is seen near Poupart's ligament. Considerable fullness is made out in the right loin, and the area of dullness is increased. The mass is rounded, smooth, firm and quite sensitive to pressure. Fluctuation can not be made out. The patient is thin and anaemic, but not markedly so. The urine shows a few hyaline and granular casts, no sugar, but considerable albumen, pus and blood. Specific gravity 1020. *Blood* shows slight leucocytosis.

Diagnosis of renal tuberculosis was made, notwithstanding a suspicion of cancer, based upon the history of previous tuberculosis of the knee and the later symptoms, with the urinalysis. Cystoscopy was not done, nor was any effort made to determine the efficiency of the other kidney, as the operation was undertaken especially for the cure of the fecal fistula. The left loin was apparently normal.

On December 21, 1903, assisted by Dr. Humphrey, I excised the superficial tissues about the fistula which communicated with the colon. In attempting to free the colon from the deeper tissues an opening on its posterior aspect was disclosed. This was not the result of trauma but was a true fistula, the edges of the mucosa being firmly united to the muscular and fibrous coverings. The mucosa had to be freed from its attachments so that proper closure of the opening could be made. After both openings in the gut had been

closed, the kidney was removed and with it about three inches of the ureter, which was much thickened and indurated. The fistulous tract was curretted, as was the bed from which the kidney was taken. Three drains were inserted and the wound closed. The patient recovered after a somewhat tedious convalescence, leaving the infirmary January 28, 1904. When seen a short while ago she was in improved health, but still had a suppurative sinus in the loin. She passed a small quantity of urine during the first twenty-four hours, but the quantity rapidly increased and by the third day a normal amount was discharged. I was surprised to note a marked improvement in the character of the urine which immediately followed the operation.

Specimen shows the kidney perhaps slightly increased in size with a firm capsule which was incomplete anteriorly where the kidney was in relation with the opening in the intestine. The kidney itself seemed to be almost destroyed by the disease process, being of a pale yellowish color. Upon incising its structure large cavities were seen containing a cheesy, purulent material. The pyramids were almost entirely destroyed; the calices were simply capsules for the cheesy material. The cortical portion could be but indistinctly made out. The ureter was thick and indurated, very friable, breaking off under slight manipulation.

Microscopically, the capsule was very much thickened with here and there nodules of granulation tissue but no giant cells in the sections examined. The cortical portion is thickened, containing masses of cheesy material. The glomeruli have undergone fibrous change and some of them further a mucoid degeneration. Around these glomerules which are more nearly normal, the capsule is thickened. The tubules are almost all filled with casts. Considerable round celled infiltration is observed between the tubules. In some of the larger cheesy masses we find near the edges giant cells surrounded by epithelioid and lymphoid cells. In the central zone of the kidney, among the larger blood vessels we find a marked increase of connective tissue. The tunica externa of the blood vessels is about four or five times its normal thickness. Media is thinner than normal. The intima is considerably thickened. The tubes in the pyramidal portion show but little change, save from comparison; some casts. Between the tubules is seen a proliferation of connective tissue and round celled infiltration.

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DISCUSSION.

Dr. Roberts: Dr. Sherrill, in his paper, cov-

ers so very thoroughly the pathology of tubercular disease of the kidneys, that he left nothing for me to add. In relating the symptoms he spoke of severe hemorrhage, as of frequent occurrence. This is at variance with my own experience, and what I have gathered from the literature on the subject. F. Tilden Brown, who has written a good deal on diseases of the kidney, in an article in "Reference Handbook of the Medical Sciences," on the subject of tubercular disease of the kidneys says, "a mixture of blood in the urine, in sufficient quantity to attract the attention of the patient and be called a hemorrhage, is an unusual symptom, which has, however, at times, been noted as one of the earliest; but it points with vastly greater probability to the presence of a new growth." On the other hand, a microscopic quantity of blood is among the commonest of the symptoms of renal tuberculosis, from the time of rupture of the lesion, until the end. Pain is a variable symptom, sometimes being as acute as in calculus, sometimes scarcely complained of, and again consisting of a dull aching in the lumbar region. Frequently an enlargement of the kidney is detected, when the patient has complained of little or no pain. Tenderness on palpation is a most constant symptom, and is noticed whether any enlargement can be detected or not.

Polyuria, as mentioned by the essayist, is one of the earliest symptoms. F. Tilden Brown has coined the word "thamuria" for frequent micturition. The presence of the bacillus in the urine, in connection with the other symptoms, makes the diagnosis absolute, but as Dr. Sherrill has said, the bacillus is not always found, and then again, on account of the striking resemblance between them, the smegma bacillus may be mistaken for it. The smegma bacillus has been found in the urine taken from the ureter.

As to operative interference—as Dr. Sherrill has stated—nephrectomy is the only thing to be considered. Resection and nephrotomy are thought to be virtually useless. Albarran advises against nephrectomy, if the pelvis of the kidney is involved. Koenig does nephrectomy, even if there is evidence of slight disease in the other kidney. He states that he has seen the removal of an extensively diseased kidney—notwithstanding the other one was somewhat affected—followed by local and general improvement, sometimes even a symptomatic cure. He relies upon vesical cystoscopy, and manual examination for determining the condition of the other kidney. He advises against catheterizing the ureters in tubercular disease. Albarran and others claim that catheterization of the ureters is safe when the tract is the seat of tubercular disease. The weight of opinion—as Dr. Sherrill has

stated—is against nephrectomy, when the opposite kidney is involved.

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Dr. Bullitt: I think we all found Dr. Sherrill's paper well prepared and very interesting. The lesion of which he spoke and of which he showed you a specimen is, fortunately, not a very common one, and many of us have not had occasion to encounter a case of this kind. In a comparatively small number of kidney cases, I have encountered one of the kind he describes and which exhibits some of the disease processes that Dr. Sherrill spoke of.

First, the enlarged and thickened ureter is well shown here, also the enlarged kidney and the perinephritis. When we look at the cut surface of the kidney, it can be seen that the calices are involved more below than above, which would indicate that the process was probably ascending rather than descending. This could not be determined at the time. When we look at it closely we see it studded with a large number of little projections which without microscopic examination are apparently miliary tubercles.

This woman was one of the unfortunate ones who have a perceptible enlargement on both sides; the bladder was ulcerated, its walls were thickened, its capacity diminished to only an ounce or two. We thought that probably the other kidney with its ureter was also involved. There was pain in connection with the right kidney. The operation was undertaken in the hope of relieving the pain. It relieved the pain but she went home and died as was expected at the time of the operation.

The manner of infection is one of great interest. It bears a close relationship to the form of treatment, therefore, the manner of infection is of great importance. If secondary, following infection of the bladder, the probability is that both kidneys would be involved. On the other hand, if the infection has occurred by way of the blood, it is probably confined to one kidney. If the diagnosis could be made while confined to one kidney, its removal would offer a fair promise of success. If, however, the bladder has become involved, and the mouths of both ureters, whether the process has ascended to the kidneys or not, the prognosis is grave. Perhaps all of them will ultimately succumb.

I remember an article, written by one of the Denver men, which dealt with genito-urinary tuberculosis and the effects of the climatic treatment on these conditions. Unfortunately I have not been able to run across this article again. This man detailed a great number of cases of tuberculosis involving the kidneys, ureters and bladder of patients who had come to Colorado for the climatic conditions. His experience was in no way favorable, as most of these cases had not improved, and none were cured.

The communications that sometimes occur be-

tween the kidney and the neighboring organs, as the stomach, intestines, and even the thoracic cavity, are of great interest and certainly are of great rarity. Dr. Sherrill reports one of this kind, and it was quite in keeping with his usual modesty that he failed to report it until he found that others had reported cases of the same kind. Communications between the kidneys and other organs, with the breaking down of tissues, occur just as they do between gall bladder and intestine.

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Dr. Humphrey: The unique feature in this case reported by Dr. Sherrill was the opening in the intestine posteriorly, crescentic in shape and inverted, and it was with considerable difficulty that the mucous membrane was separated from the other coats of the intestine so that the opening could be closed.

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Dr. Cartledge: I do not think this kidney paper should go by without discussion. We all encounter this condition. It is the most interesting chapter in surgical history. I have been peculiarly fortunate, or there is something wonderfully strange about the genito-urinary tract so far as the source of infection is concerned. We are led to believe that a great many have their origin in the bladder and extend through the ureters to the kidneys. We recognize that if it has a vesical origin, then just as in a vesical carcinomatous process, it does no good to operate at all. I believe that they are largely infected primarily in the kidney. From my experience I have looked most favorably on these cases. I have been fortunate in that all my cases recovered.

In one case I followed down the thickened ureter quite to the bladder; I was sure that some disease had been left, and yet that woman got well. I say I believe many of them are primarily in the kidney. I have never operated in the stage of the disease in which this specimen was removed, nor this specimen shown by Dr. Bullitt. Occasionally I have seen miliary tubercles in the cortical substance with large quantities of tubercular spots. I operated on a case of tuberculosis of the kidney complicated with stones. It was a question whether the calculus was primary and the tuberculosis secondary.

I was a little surprised at Dr. Roberts' statement. I thought that hemorrhage was quite a characteristic symptom of tuberculosis of the kidney; I mean hemorrhage that you can see with the naked eye. I think it is present in a large percentage of cases.

I believe, returning to the question of treatment, that we should operate on these cases unless it is proved that the disease has progressed on both sides, in other words, I do not believe a conservative surgeon would remove a tuberculous kidney, leaving another bad one behind.

It is an interesting subject, and there are a

number of these cases which go along without a correct diagnosis being made; they break into adjacent organs; they break into the colon, discharge this way and lead to death.

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Dr. William H. Wathen: About ten years ago I operated on a lady from Bourbon county, Kentucky, for tuberculous kidney. I simply made an opening through the loin and drained the kidney by a nephrotomy. She died within a few months, from the extension of the disease and the continued drainage. Three months after I operated upon her, her sister-in-law consulted me with practically the same condition. I drained in the same way, and she for many years had a continuous opening, discharging pus. These cases from all the examinations made, were considered tubercular. That was before we correctly understood the method of operating by nephrectomy, for tuberculosis of the kidney.

I operated five years ago on a lady from Corydon, Indiana, for tuberculosis of the kidney, removing the right kidney. She made an uninterrupted recovery, and is now a strong woman. There was a sinus remaining, because of a silk ligature. That was removed, and the sinus healed promptly.

As Dr. Cartledge has properly stated, it is a serious question to decide, to remove a tuberculous kidney, when there is any involvement that cannot be also removed in the removal of the kidney. Certainly there can be no logical reason why a tuberculous kidney should be removed if the tuberculosis has extended from the bladder, because we leave a tuberculous condition that has as a rule, already affected the other kidney. Hence, we are not justified in doing a nephrectomy in cases of that kind unless the kidney is functionally destroyed. Now, we ought, therefore, before we remove these kidneys, make thorough examination to learn whether both kidneys are involved, by all the means at our disposal, such as catheterizing the ureters and examining the urine before operation, etc. If we find both kidneys involved, unless one is totally destroyed and the other is but little involved, the operation is contraindicated.

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Dr. Sherrill, in closing: In reference to the opinion of Dr. Roberts in regard to hemorrhage, I would say that most of the authorities that I have consulted have reported hemorrhage in every case at some time, the free hemorrhage occurring where the calices are broken into and some vessel becomes eroded. I believe the majority of cases present microscopic hemorrhage and many, macroscopic hemorrhage.

Dr. Roberts says that the enlargement is the point that usually calls attention to this disease. I think that the enlargement occurs at the beginning of the involvement of the peri-renal tissue,

and while we do have enlargement it is not the rule.

As to whether the kidney or the bladder is first involved, Dr. Hunner in his paper claims that out of 35 cases there were only 5 in which he could say that the bladder was involved first. The majority of cases occur from above. Probably the bacillus infects some lymph gland that becomes destroyed, and then the bacillus is carried into the kidney and deposited there. It has been demonstrated that the bacillus can go through the kidney and not infect it and then infect the bladder.

In the cases operated on early 90 per cent are one-sided. Of those operated on late, 51 per cent, according to Israel are bilateral. Those cases that come to autopsy show, according to the statistics of the Massachusetts General Hospital, that of 3,460 cases of autopsy, there are 34 cases of renal tuberculosis. Early diagnosis of this condition and prompt removal is the thing to be done.

In regard to nephrotomy, I was surprised to learn that only one per cent of recoveries occurred after this operation. It is stated that patients with tubercular kidneys even on both sides may live a long time and after the removal of one kidney with the other kidney diseased, they also live for some time, and when you have partial removal of the disease the patients get along favorably.

In reference to tuberculosis of the bladder, the question may come up whether we should take out part of the bladder, or whether we are justified to leave that alone and see whether the symptoms continue. Most of the cases with little bladder disease have gotten well without operation upon this organ.

THE MANAGEMENT OF NORMAL LABOR.*

By NEVIL M. GARRETT, M. D., FRANKFORT, KY.

Another gentleman on the program is to discuss "Accidents of Labor", so at a glance one might think that there is very little to be said on "The Management of Normal Labor", and at places where the physiological and pathological are so closely related, this paper may, for the moment, appear to be incomplete, on account of its ignoring the latter.

A normal labor is one in which the vertex presents, and which is terminated within twenty-four hours by the forces of nature, without complication in any of the three stages, and without injury to the mother or child.

The keynote of this subject is asepsis. Some may say that aseptic precautions are

neither taken or required at the time of impregnation, and that normal labor is a physiological process, therefore it requires no aseptic precautions. I would remind such that conditions are vastly different at the time of impregnation and at the time of delivery. Immediately after delivery we have a large raw surface at the placental site and possibly several slight lacerations of the genital tract, which are equivalent to open wounds in other parts of the body, with the exception that the placental site and lacerations internal to the vulva, can practically be considered aseptic from the beginning, provided, no digital examinations have been made and nothing whatever introduced from without. As far probably many women who die of puerperal as we know interference from without is not contemplated in the natural plan of parturition and probably many women who die of puerperal sepsis, after delivery at full term, would have lived had not infection been introduced on the examining finger of the obstetrician or with some un-sterilized instrument or solution used during labor or the puerperium. I do not mean to convey the idea that the parturient woman should not be attended by an obstetrician, for I believe that much may be done, in many cases, toward saving the life of the child and alleviating the sufferings of the mother, by intelligent interference under proper aseptic precautions.

I do not profess to practice all that I preach in this respect but theoretically we should take as great aseptic precautions in obstetric work as we would for many major surgical operations. I realize that in many cases it would be very difficult to do this, and especially so among the ignorant classes and in cases where we have not been notified or engaged until labor has begun, but this is a day of advancement and the laity is not altogether unappreciative of surgical cleanliness.

Twenty years ago it was considered quite an accomplishment for the physician to be able to catheterize a woman without exposing her; in fact, the doctor who could not do so, in an ordinary case, was lacking in professional skill; to-day the man who attempts to do so, except where the woman refuses to submit to the open method, is a back number, and in a few more years the man who delivers his patients under cover may be classed in the same category.

At present the profession is not educated up to the ideal standard and of course the laity is not, but we may do much to improve the technique in the management of labor.

The people employ us to attend to their obstetric work because they think we possess a knowledge which they do not and they have a right to expect that we use, at least,

* Read before the Kentucky Medical Society, Lawrenceburg, Ky., October 13, 1904.

reasonable care to prevent infection. If we do not do so we fail to discharge our duty. An ignorant midwife with unwashed hands can hold back the head to prevent a perineal laceration, then cut the cord with dirty scissors, tie it with anything that happens to be convenient, and when the baby has convulsions in a few days, not have the slightest idea that possibly it is dying of a tetanic infection received through the cord at the time of delivery or subsequently.

The physician should at all times be careful as to aseptic precautions in maternity cases, but especially so if at the same time he is treating infectious cases elsewhere, and the occasion may arise where it will be better for him to decline to attend an accouchement case.

The management of normal labor and the management of the period of gestation are so closely associated that it is difficult to separate them. When we are engaged in advance to accouche a woman we should advise her as to the preparations for the expected delivery; tell her to take exercise daily, and that as the time for delivery approaches to keep her bowels gently open, to drink larger quantities of water than usual, to keep the kidneys flushed, and to report to us at once upon the appearance of any abnormal sign, such as suppression of the urine, severe headache, swelling of the hands or feet, or excessive nervousness. If she be a multipara we should inquire into her previous pregnancies, and if a primipara we should make a digital examination at least six weeks before the expected confinement to ascertain if there be any obstruction to delivery.

In most cases where people lay enough stress on confinement to engage the services of a physician before the onset of labor it is a comparatively easy matter to have a supply of sterilized rubber sheets, cotton sheets, towels, gowns and vulvar pads or cloths on hand at the time of delivery. The articles may be put up in neat packages, wrapped in towels, so that no part of any article to be sterilized is exposed to view. An ordinary wash boiler or large tin bucket, if it have a well fitting top, makes a good steam sterilizer for home use. Put about two inches of water in the boiler, then place an empty tin can on its side in each end of the boiler. On the tin cans lay a shingle or small board, on which the packages to be sterilized are to be laid, so that they may be steamed without touching the water. Put the cover on tight and set the boiler on the stove, where it is to be left for half an hour after the water has begun to boil. This will leave the articles more or less damp, but they may be dried in the oven of the stove, care being taken not to scorch them.

After drying they should be placed in a clean drawer or closet where they will be out of the dust and should not be opened until labor begins, and then with clean hands only. They should be prepared about three weeks before the expected confinement, so as to allow for errors in calculating the time, and if not used should be re-sterilized about once a week. After you have practiced this method a few times you will find that it is not very difficult. The packages may be steamed while the family cooking or ironing is being done and may be dried while the stove is cooling off afterwards.

When labor begins the bed should be prepared by placing a rubber sheet, covered by a cotton sheet, next to the mattress and over this should be placed a second rubber sheet and cotton sheet. Over the last cotton sheet should be placed a cotton sheet folded to four thicknesses, for the purpose of absorbing the blood and secretions. In the absence of the second rubber sheet several clean newspapers may be spread out in the lower fold of the sheet which is used for a pad. Over all this should be placed another sheet with which to cover the patient, and over this such other covering as may be necessary.

The patient should be instructed to take an enema at the onset of labor, unless the bowel has been well emptied within the last two or three hours. After the bowel has acted from the enema she should take a sponge bath all over with warm water and soap, paying especial attention to the vulvar and anal regions. The sponge bath is preferable to the tub bath on account of the greater liability of dirty water entering the vagina if the tub bath be taken. The bath should be followed by sponging from the breasts to the knees with a 1 to 1000 bichloride solution, after which she should put on a sterilized gown.

I believe that the cleanliness of the patient is one point which is not sufficiently insisted on by many of us. It matters not how clean the examining hand of the obstetrician may be, if the external genitals, anus, thighs, etc., of the patient are not clean, he may carry infection into the genital canal in making his examination.

The physician should make it a rule to respond to his obstetric calls as soon as possible, for by so doing he may be able to correct faulty preparations, replace small parts, prevent perineal lacerations, etc.

Upon entering the lying-in room the obstetrician should note the general condition of the patient, give such assurances of a successful termination of the labor as he is justified in doing, inquire as to the condition of the kidneys and bowels and as to whether the enema and bath have been taken. If they

have not he should have them attended to at once. Under some circumstances the enema may be omitted, but unless the time of delivery is supposed to be very near at hand the patient should have at least a bath about the abdomen, thighs, genitals and anus. While this is being attended to the physician should prepare his hands for the examination. He should first wash off the superficial dirt from his hands and arms up to the elbows, with warm water and soap, after which he should remove the dirt from under and around the nails with a knife or other instrument. After this the hands and arms are to be well scrubbed with a nail brush, using warm water and soap and paying especial attention to the nails. They should then be rinsed with plain sterilized water, after which they are to be washed with, or immersed in, some chemical antiseptic, of which a solution of bichloride of mercury is about as convenient as any. Where the bichloride is used care should be taken to rinse the soap off first to prevent the formation of inert albuminate of mercury. The nail brush should be clean to begin with. I find it convenient to carry in my grip a cheap wooden backed brush which has been boiled at the office and placed in a clean envelope.

If the attendant has a cut or abrasion on the examining finger or hand he should wear a rubber finger cot or glove as a protection, both to the patient and himself. Such abrasions are difficult, if not impossible, to sterilize. After leaving the antiseptic solution the hands are not to be wiped, or come in contact with anything, before reaching the vulva and vagina; and are to be re-prepared for each subsequent examination, unless the examinations are so close together that the examining fingers have touched nothing after having left the vulva. If a lubricant is used for the examining fingers it should be sterilized. It is convenient to carry in the grip a bottle of vaseline, which has been previously sterilized by putting the bottle in a tea-kettle with about an inch and a half of water and leaving it on the stove for half an hour after it has begun to boil. The bottle should be opened before the hands are washed and placed in a convenient place, so that the examining fingers may be inserted into it without touching the outside of the bottle. Sterilized vaseline will also be found useful in case a lubricant is needed in dry labor. The vaseline should be either thrown away or re-sterilized after each obstetric case.

The patient having had her bath, having been sponged off with a bichloride solution, and having gotten between sterilized sheets, is now ready for examination, and right here is where I believe there is very great room

for improvement in our technique. Edgar says "We may accept the following statements as proved: (1) The microbes which are known to cause puerperal infection either do not exist in the healthy vagina at all, or are there in a state of innocuousness. (2) The gonococcus is occasionally found in the vaginal secretions. (3) When pyogenic cocci are found in the puerperal uterus they have been introduced from without. (4) As the vagina does not contain pyogenic cocci, auto-infection with them is impossible. (5) Pyogenic cocci do exist in a state of activity on the vulva and in the vulval canal. The physician in the majority of cases is the responsible party, and must reduce the danger from himself to a minimum, by making examinations infrequently and by complete asepsis of the hands and if possible of the external genitalia." In ordinary practice it is a difficult, if not impossible, matter to render the external genitalia sterile, therefore we should as far as possible, avoid contact with them in introducing the examining fingers. This is best accomplished by having the external genitals exposed and separating the labia widely with the thumb and fingers of one hand, while introducing the examining fingers of the other. During this time the limbs may be covered with sheets. Whether or not we are willing to accept the statement in regard to the presence of pyogenic cocci on the vulva, the open method of examination appeals to me as being safer for the patient, on account of the close proximity of the anus, with which the examining fingers are liable to come in contact before entering the vagina, when we make our examinations by touch instead of sight. This danger is increased toward the termination of the second stage of labor, when the contents of the bowel are so frequently forced out by the presence of the child.

At the very first examination we should examine for obstructions to delivery, note the force of uterine contractions; the condition of the os, and if this is sufficiently dilated the presenting part of the foetus, and if possible the position of the foetus, and whether or not the membranes have ruptured. An exact rule as to the frequency of subsequent examinations cannot be given, the matter depending largely on the stage of labor and the force and frequency of uterine contractions.

"Examination after rupture of the membranes may guard against the neglect of face presentation, which sometimes occurs at this time, and of prolapse of the small parts of the foetus or of the cord". As the head nears the vaginal outlet, if the pains are good, it is well to keep constantly in touch with it, lest we

be taken unawares by one or two strong pains and the perineum ruptured.

If the first stage of labor be prolonged the patient should be encouraged to take small quantities of liquid nourishment, and be induced and aided to sleep, if possible, between the pains, especially if labor commences early in the night. For this purpose 1-6 of a grain of morphine with 10 or 15 grains of chloral may be used.

Unless there is some special indication for hastening delivery it is probably better to let nature take its course, though small doses of fluid extract of ergot may sometimes be given without harm, and possibly with some good effect. For this purpose some prefer quinine. Possibly a more efficient method, in the first stage, is to make traction on the anterior margin of the os uteri, with accompanying friction of the fundus.

How long one should wait before rupturing the membranes depends upon circumstances. If delay is due to tough un-ruptured membranes, despite a fully dilated os and normal soft parts, the membranes should be ruptured with the finger nail or a sterilized instrument. The same procedure is indicated if there is uterine inertia, due to over-distention. In the absence of any indication for rupturing the membranes may be allowed to remain intact until they reach the vulva, unless they have previously been ruptured by nature.

As a rule the patient should not be allowed to get up and walk around after the completion of the first stage of labor, on account of the child being born while the mother is in the erect posture.

Usually the patient need not waste her strength at bearing down efforts in the first stage of labor, but during the second stage, and especially if the contractions are inefficient, she should be instructed to hold her breath and bear down.

The most important part in the management of the second stage is the prevention of perineal tears. Unless there is some indication to the contrary we should give ample time for the stretching of the soft parts, and may be of great assistance in retarding the birth of the head by pressure against it during the pains, if they are severe. Chloroform inhalation is also a valuable adjunct at this point. In addition to alleviating the sufferings of the mother it helps to relax the soft parts.

Immediately after the delivery of the head the attendant should examine to see if the cord encircles the neck, and if it does a loop should be enlarged and drawn over the head; but if this cannot be done the cord should be

cut between double ligatures or haemostatic forceps.

Immediately after the birth of the child attention should be paid to establishing its respiratory function, unless it be already established, as evidenced by crying. After respiration is established the child should be placed on its right side to aid in the closing of the foramen ovale, and its head should be low to prevent cerebral anemia.

As soon as the attendant has looked after the respiration, posture, etc., of the child he should examine the fundus of the uterus to see if there is another child present, and if not, to see if the uterus is well contracted. If the uterus is flabby, contraction should be secured by the kneading process, and I like to keep my hand, or that of some one else, almost constantly in contact with the fundus for the first half or three-quarters of an hour.

I have not been in the habit of following any set rule in regard to the time of tying the cord. If the child is all right I tie it as soon as I get ready. Before ligation it is a good plan to strip away the Whartonian jelly from the abdomen of the child for two or three inches. This gives a thin stump for subsequent separation. The cord is now ligated, about an inch and a quarter from the abdomen, with a sterile string or cord. You can always have this on hand by carrying in your grip a piece of clean white cotton cord, immersed in a good antiseptic solution, in a wide-mouthed bottle. This cord is also convenient to have when it becomes necessary to make a tampon. The scissors with which the umbilical cord is cut, and haemostatic forceps, which may be needed if there is occasion for great haste, should have been sterilized by boiling and kept in readiness. The material for tying the cord may be prepared by boiling at the same time the instruments are boiled, if the attendant so prefer.

After the vernix caseosa has been removed with olive oil or vaseline, and the baby gently bathed in tepid water, the cord should be dusted with a non-toxic aseptic or antiseptic powder, such as powdered boric acid. The cord is then to be wrapped in sterile absorbent cotton or gauze and kept as dry as possible. Since septic infection may occur at the umbilicus the nurse should be careful to have her hands clean before touching this region.

Unless there is some special indication for early delivery of the placenta, such as alarming hæmorrhage, it is well to wait twenty-five or thirty minutes before attempting to remove it.

After delivery of the placenta and membranes the patient should have from a half to a drachm of the fluid extract of ergot to prevent post-partum hæmorrhage and sepsis,

and to aid in involution. The contraction of the uterine muscle keeps the sinuses closed, thus preventing the entrance of septic material into them, and it aids involution by lessening the blood supply to the uterine muscular tissue. On the other hand I do not know of any valid objection to the use of one or two doses of ergot after the completion of the third stage of labor, provided none has been given sooner.

At the completion of the third stage of labor, the external genitals, buttocks, lower abdomen, and thighs should be cleansed with sterile water, and if necessary a clean sterile gown put on the patient. The temporary bedding should be removed leaving the patient on the first rubber and cotton sheets. At this time a careful examination should be made for perineal lacerations. It should be remembered that there may be severe lacerations of the vagina which are not visible externally. The labia are to be separated, both hands being used, and the parts thoroughly inspected. Following this examination, if no surgery is required, a sterile pad or napkin is to be applied to the vulva and held in position in the same manner as menstrual napkin. This should be changed as often as it becomes soiled, and only sterilized pads and napkins used for the first week. Deodorizing chemicals or those having an odor of their own should not be used on the vulva on account of their masking the fetor of decomposing lochia, a valuable sign of early septic infection.

The physician should be within call for at least an hour after the birth of the child, and should not leave the patient until good uterine contraction has been secured.

After completion of the third stage of labor the mother should receive some slight nourishment, as milk, chocolate or soup, and should be allowed and encouraged to sleep.

If it is not convenient for the physician to see the patient daily, for the first three or four days, the nurse should be instructed to see that her bowels move within the first forty-eight hours, and to notify the doctor of any abnormal condition, such as retention of urine, chill or fever.

If the labor has been perfectly normal and the patient is not unduly exhausted, she may be allowed to use the commode from the first, as there is no good objection to it, and it facilitates the passage of blood clots from the vagina. She may also be allowed to assume the most comfortable position in bed, and may be allowed to sit up in from one to two weeks, but should not be expected to perform much work, which requires a good deal of standing or walking, for four or five weeks after the birth of the child.

NASAL CATARRH.*

By A. H. EDWARDS, M. D., HOPKINSVILLE, KY

The busy practitioner treats a great variety of cases in the course of a year, but whatever the nature of his call may be, malady or injury, about every third patient will have in addition, some form of nasal catarrh.

Wherever the population is dense, especially in dry and dusty climates, or in cities situated near large bodies of water, we find more chronic rhinitis than elsewhere. Hundreds who suffer from this disease, not finding their health visibly impaired, make no attempt to cure the malady, and drag along their miserable existence year after year, hawking and spitting away, relieving themselves of half-dried secretions, accumulations of fetid muco-purulent deposits that smell even worse than they look, with no apparent concern, caring not for the feelings of those around them, until tired nature, having exhausted herself and having consumed all but the bone (and sometimes even that), stops, like a fire that has burned itself out for lack of fuel.

Acute rhinitis—called by some people “a cold in the head”—is a most common disease. The cold that is continuous and stays right with one, instead of passing off, as usual, becomes chronic rhinitis. That seems to be the only observable difference between the two. When chronic rhinitis merges into the “intumescent” form, all local symptoms become more or less aggravated and the conditions in general are sufficiently characteristic to warrant distinction and classification under another head, either as a different disease, or at least as a different form of the same disease. Modern nosology has accepted the term “intumescent rhinitis” on account of the hyperplasia always encountered, but as there is no elevation of temperature with the swelling, inturgescent would be a better or more accurate expression.

The patient suffers no little personal inconvenience in this form of nasal catarrh, but as he has intervals of relief, when his nasal passages are comparatively free and his breathing unobstructed (fancying them indications of recovery) he postpones his intentions of taking a regular course of treatment.

Not until the hypertrophic variety of this disease has been attained and all patent medicines have failed to relieve, do the majority of patients consult a physician, and even then do not become much concerned until he finds his breathing apparatus and his nose so occluded that he is compelled to breathe

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through his mouth, or perchance picks up the pamphlet of some advertising specialist describing his condition exactly and calling it the "first stage of consumption." Usually this last occurrence gives him some alarm and he decides to take a course of treatment.

Whether the hypertrophic period be one of weeks only, or whether it be one prolonged misery lasting many months, is due in great measure to the kind of treatment the patient receives, as well as the observance or non-observance of the usual hygienic precautions demanded of every patient under such circumstances where time is an important factor. Sooner or later the hypertrophy will diminish and the sufferer be permitted to breathe through his nose again. First one naris and then the other will open up and will keep on opening, his nose broadens; the alae nasi thicken and the fosae become much larger; he has the dull expression, the leaden hue and prominent lips of the victim of the fourth stage of this disease—the atrophic form of chronic nasal catarrh.

The fetid, foul-smelling secretions are very offensive in this form. The nasal cavities widen and enlarge to two or three times their normal size. The secretions become dry, adhere and form crusts, sometimes of great size, which rapidly undergo decomposition and give off an odor that is so offensive as to be almost unbearable to any one confined to the same room. The loss of the sense of smell, which is always the case in this condition, renders him unconscious of the torment that he constantly forces on others.

Fortunately—very fortunately—this condition may be palliated if not entirely abated if proper treatment is given. A spray of glycerine (pure) 15 parts, borate of sodium 40 parts and rose water 45 parts, is an excellent preliminary wash, or cleansing agent, and should be used night and morning. I usually follow this with chiolin. Chiolin has about the same consistency of vaseline and can be used in the same way, after melting it in a vaseline atomizer. It forms a smooth, even coating over the whole mucous membrane, which is not only agreeable, but very healing.

After the frequent use of it for some time, it will usually check the secretions and arrest decomposition. Cocaine in sprays has been used by some with good effect, but I do not approve of its use, except in operating, on account of the great danger of the patient contracting the cocaine habit.

In any disease where the pathology is so little understood, the treatment must be more or less empirical and based largely on the results of former experience. As a rule, the treatment of all chronic forms of rhinitis is

about the same through the earlier stages. An examination of the parts will disclose one of two conditions present dependent upon the character and duration of the hyperplasia; when red and congested in appearance, sedatives or mild astringents should be used; when pale and colorless, stimulants may be applied to the best advantage. But in either case the galvano-cautery is the safest, if not the best means known, to reduce the hypertrophy when the latter is sufficiently intense to stop up the nose entirely and prevent breathing.

We hear much of the all-important necessity of cleanliness in connection with chronic rhinitis. It may be "next to godliness" in theory, but cleanliness is a relative term, and in actual practice, ordinary cleanliness, in this disease, would imply continual irrigation of some kind, night and day.

In some cases thirty minutes after the parts have been thoroughly cleansed the odor begins to assert itself. So we should be patient, and do everything possible to control the disease and allay the smell.

Very fortunately for humanity in general, this is not a germ disease, and should it run its full course it will never terminate in tuberculosis, for they are not related in any way, the one with the other.

PLACENTA PREVIA CENTRALIS WITH EXCESSIVE HEMORRHAGE, SUCCESSFUL DELIVERY AT THE EIGHTH MONTH— REPORT OF A CASE.*

By R. B. GILBERT, M. D., LOUISVILLE, KY.

Placenta previa is fortunately a rare complication, especially the central variety, which is very rare. Prof. Williams, of John Hopkins University, estimates that it occurs once in 1,000 cases in private practice. In my own experience, attending 1,142 cases of confinement to date; I have seen several cases of partial placenta previa with much antepartum hemorrhage, but the case I am about to report is my first and only case of true placenta previa centralis, the case being No. 1,137 in my obstetric record book.

On the third day of September, 1904, about 7 o'clock p. m., I received a message over the long distance telephone from Dr. P. R. Shelby, at Princeton, Ky., asking me to come on the first train to Princeton to assist him in a case of placenta previa. Without delay I

* Read before the Brashear Medical Society, in Taylor'sville, Ky., October meeting.

summoned a trained nurse and we boarded the train leaving Louisville at 9 o'clock p. m., and reached Princeton at 2:30 the following morning.

The patient, Mrs. G., a primipara about 21 years of age was found resting quietly in bed and appeared to be in good condition, barring some excitement incident to my arrival. She remarked that there must be something serious the matter to require my coming so far to see her at such an unseasonable hour. But for the fact that Dr. Shelby had very judiciously prepared her mind by telling that the case was not serious, I believe the excitement would have been greater.

I was informed that she had been having slight labor pains for about twelve hours and that with each pain there was some hemorrhage. On examination the vagina was found full of clotted blood, the os was sufficiently dilated to admit the ends of two fingers. The soft spongy mass of the placenta could be easily felt. We introduced a large bivalve speculum and cleaned off the cervix carefully and watched for the flow of blood. Moderate utrine contraction came on presently and while it continued a small stream of blood trickled from the patulous os. We watched the same procedure with several recurring paroxysms of uterine contraction for the space of about twenty minutes, and the amount of blood lost during that time was estimated at about half an ounce.

Dr. Shelby and myself came to the conclusion that the limited flow of blood and the slight amount of dilation of the os did not yet warrant active measures toward delivery. We, therefore, packed the vagina tightly with non-absorbant sterilized cotton, and gave the patient a dose of bromide of potassium. After assuring her that there was no immediate danger and advising her to try to take some needed rest, we retired to bed leaving the case in charge of the trained nurse with instructions to call us immediately if active hemorrhage should occur.

The patient slept fairly well until eight o'clock, about five hours; with the exception of occasional labor pains her sleep had been tranquil. As there was very little blood passing the tampon was allowed to remain and the dose of bromide was repeated. She continued to rest quietly until about 2 o'clock in the afternoon, when decided labor pains began, recurring at intervals of eight or ten minutes, and at the same time blood was oozing quite freely through and around the tampon. On removing the tampon the os was found to be much dilated and the hemorrhage quite free and growing more so with each succeeding pain.

After a hasty consultation we decided to

take active steps at once to deliver the child and arrest the flow of blood, which by this time began to look alarming. After irrigating the vagina thoroughly with a hot permanganate solution, and with my right hand thoroughly cleansed and freely lathered with Synol soap, the tips of four fingers were passed through the os and firm pressure maintained, together with digital manipulation. The flow of blood continued. After about thirty minutes of manipulation I was able to pass the hand freely up into the uterus where I could feel the boggy mass of the placenta. By sweeping the finger around as far as I could reach the same thick, soft, bleeding mass presented itself directly over, and obstructing the os.

Dr. Shelby was at this time rendering great assistance by firm pressure over the uterus, *a la Crede*. I also placed my left hand over the abdomen and with my right hand proceeded to perforate the placental mass. At each movement of the fingers during the operation the blood gushed freely from the vagina. The patient heroically endured the pain without an anaesthetic, she having declined to take chloroform.

Having passed my hand through the placenta I immediately ruptured the membrane letting the amniotic fluid escape. The foetal head could be plainly felt in the first position. Uterine contractions came on at once strong and rapid causing the head to descend and thus acting as a tampon, active hemorrhage was promptly arrested. The labor now progressed rapidly. About one hour after the membranes and placenta had been perforated the child's head was well down upon the perinaeum, we then applied forceps and quickly completed the delivery. The child was delivered living and fairly active.

After delivery of the child the uterus contracted as usual and soon expelled the placenta together with a considerable amount of clotted blood. The mother, who by this time was looking quite pale, called to Dr. Shelby telling him she was "getting blind" and apparently lost consciousness. The pulse was weak and very rapid. The doctor quickly gave a hypodermic injection of strychnia and atropine, the head was lowered and the hips were elevated upon pillows, hot bottles were applied to the extremities and half a pint of saline solution was thrown into the rectum. Consciousness soon returned and the ruddy color came back to her face; she made a good and uninterrupted recovery. The infant lived only two hours.

The placenta presented no unusual appearance. The perforation through which the child had passed in its descent, was through the thickest part of the organ and about one

inch from the site of the attachment of the umbilical cord.

The trained nurse made an effort to measure the amount of blood lost by the patient (of course much of it was absorbed by napkins and tampons); she assured me that there was over one gallon of blood collected in the vessels used, in addition to what was absorbed by the napkins and tampons.

A LETTER FROM NOTES TAKEN ON A TRIP TO THE PAN- AMERICAN MEDICAL ASSOCIATION IN THE CITY OF MEXICO.

By B. G. SIMMONS, M. D., ADAIRVILLE, KY.

(Written for the Kentucky Medical Journal.)

The city of the Montezumas! The country of the Aztecs! "The Land of the Setting Sun!" The country on the Western Continent presenting a high civilization centuries prior to the first Georgetown settlement. A civilization arrested and virtually abolished for ages by the butcheries of Cortez. The place of splendid cathedrals contrasting with abject beggary. The country of arrested development, grouping present Nineteenth Century Pullmans and electric lights with Sixteenth Century burros and forked-stick plows; where gold and silver and precious stones have always abounded; where beauty and gallantry, and hospitality and exceeding cordiality, and tropical fruits and flowers prevail all the year round. The land where the heat of the torrid zone is tempered by an altitude of eight thousand feet above sea-level, and where winter and summer are blended together into a delightful perennial mean temperature of about sixty to seventy degrees, and where strawberries are in season from Christmas to Christmas.

How is that for a bill of fare to a poor country doctor, who has had pills for breakfast, broken bones for dinner, the consideration of the diseases peculiar to horses and cows for supper, and dreams compounded of treatises on la grippe, soft corns, micrococci, bold hives, hypnotism, itch *et omne genus*, for forty-four consecutive months without a break in the dietary? All this, and more, was promised to the delegate to the Pan-American Medical Congress which met in the City of Mexico in November, 1896. My credentials were obtained at a meeting of a half

dozen of my nearest medical friends by a unanimous rising vote.

As this Congress embraced delegates from all the nationalities of the Western Continent, from Canada to Brazil, it was likely to be a full-grown, though a heterogeneous body; and when it was announced that the Mexican authorities, national, State and municipal, would participate and extend special courtesies, I felt almost persuaded to join the procession.

When the chairman of transportation for the Congress informed me that the official train for the delegates was a special train conducted by Reau Campbell, starting from Chicago and picking up the various State contingents at divers places *en route*; and that the said Campbell was personally conducting a tourist party to the main points of interest in Mexico, I felt that all I needed to decide me in going was some home friends to accompany me.

But, when a few days later, Reau Campbell's circulars came thundering down from Chicago announcing the fact that he would stop his tourist train a few hours at San Antonio on the twelfth, to allow any delegates from the Central Traffic Belt to join them; that he would take them in among his specially selected family of friends and brothers; that he would stop at any point of special interest whenever and as long as it was desired, that he was accompanied by a dining car, and a *chef de cuisine* of national reputation, and a locker and refrigerator filled with all the delicacies and substantial that could be desired; that he would furnish guides, carriages, burros, gondolas, hotels, and would personally attend his intending party to all suburban sights, mountain heights, bull fights, etc., I determined to go, with or without friends, if it took the last dollar my wife had; because a Mexican bull fight was a sight my bowels had been yearning for for years and years.

I thought I had several saw-bones ripe to go with me, but one couldn't find a hole between his professional engagements big enough to escape through; another had married a new wife and was taking his honeymoon in another direction, and prayed me to excuse him, which I did without loss of time; and thus they dropped out like autumn leaves, one by one, till I found I must visit the bull fights alone. "It was ever thus from childhood's hour." When I am ready no one else is ready. Possibly if I were bigger, or better

looking, or better company—but no, it can't be any of them.

If any one should be rash enough to agree to accompany me on this trip to the Pan-American Medical Association, I will give fair warning that he must have patience, for I am a slow coach, and propose to stop on a side track whenever it suits me. "I am merely a plain blunt man, that speak what I do know"—sometimes.

While *en route* to San Antonia, at one of the small stations, a man and woman of the most immense proportions boarded the train. She was near six feet high and large in proportion. He was scarcely so tall, but much broader in the beam. They both occupied the same seat, but they filled it so full that it foamed over, as it were, like the froth on an ale cup. He very shortly commenced a series of groans which sounded, as they issued from his capacious breast, like the roar of lions. Every one looked an inquiry, but no one answered. We finally concluded that that was only one feature of a free show, and all again buried their faces in their newspapers.

But the show went on, and grew constantly wilder and more weird. He seemed to be unconscious that there was any one else in the train. His mate looked sad and sorrowful, but said nothing and did nothing. I looked around to see if there was any doctor aboard who was not endowed with my scruples in approaching this Goliath of Gath and his Amazonian running mate. But there seemed to be no doctors present, or at all events, none without a prejudice against being swallowed up, body and boots.

I tried to read on, but it wouldn't go. I at last ventured up and asked if he were suffering.

"Well", he said, "I ain't enjoyin' myself none, I can tell you that."

With some quavering of the voice and trembling of the knees (though I wasn't scared) I asked him what hurt him.

"What hurts me? Why my head an' my stomach, an' bowels, an' I'm jest sick at the stomach, too, but I can't puke, an' I've got the cholly mangus an' everything."

"Have you taken anything?"

"Who told you I'd been takin' anything? I jest tuk one, an' I wisht I may die if I don't bleeve it was poison."

"I mean medicine. Are you sure you didn't take but one drink?"

"Ole 'oman, I see you a nudgin' him. Stranger, I mout a tuk a drap or two mo'—Oh Lawd, my stomach!"

"I think maybe I can give you something to empty your stomach, then a small anodyne will perhaps relieve your suffering."

"Are you a doctor?"

"Yes."

"Well now, look a here, if you can stop this hurtin'—but then we hain't got no spoon nor nothin' to take methin' in."

"I don't need a spoon. Slip up his sleeve, Madam, please."

"Hol' on there Doc,—none o' yer projeckin wi' me. I hain't ben bled sence I was a boy an' had the pneumony feveh, an' the veins an' things in my arm is three inches deep, an' I'm danged if I'm a goin' to have you a gougin' aroun' in me."

"This is is a hypodermic syringe to throw the medicine under the skin, so you will not have to swallow it, and it acts very much quicker."

"Say it is?"

"Yes, it will only take a moment, hold right still—now, there you are. Now, as the train has just stopped, step out lively and vomit."

There was the sound of the rush of great waters, coupled with groans, frantic gestures and violent imprecations, and just as the train was about moving he came stumbling in.

"Say, Doc, do that little stickin' thing allers make a feller puke? My stomach do feel lots better'n what it did. Say, did you see what I flung up? Them cabbages must a swelled up, 'cause I haint eat that much altogether in two months."

"Docteh, he eat all that at dinneh, except what he's drunk sence dinneh."

"Ole 'oman, you allers—Doc, she's allers agin' me—I haint had no appetite for three weeks, an' I hain't drunk nothin' of no account nother. Oh Lawd! here's some o' them pains in my innerds agin. Oh! oh-h-h."

His howls rose above the roar of the cars and then gradually settled down to a demi-semi-quaver, with one hand on the most prominent point in front, and he doubled up like a jack-knife.

"Now, just one little anodyne dose to stop the cramps, since the stomach is empty, and you will feel like a new man," said I.

"No you don't nother, I'm danged if you do. Do you reckon I eat a bushel of them cabbages? I flung the last one up out there."

"This is not to vomit you this time, it is to stop the pains."

"Well now here, whyn't that tother one stop the pains when I puked up the cabbages?"

"That was to empty the stomach, and this one is to stop the cramps."

"That so? Well now, hurry up, 'cause I feel them pains is a comin' back. Hello! stop! Hol' on Doc, that'll do. Now shet up that little weepin. That's it. Now you stay aroun' here a little, Doc. Set down right there. Sairy, I feel that truck a guine all through an'

through me. I feel good now. Doc, I like you. Say, where did you come from anyway?"

"Kentucky."

"Blame if I wouldn't have thought so from the fust if you hadn't a been such a little cuss. Gosh! I never felt as good in my life. Say, Doc, what sort of truck was that anyhow? I want to take some of it home wi' me. Come over here an' set on the end o' this bench, so I can see you good."

Just then he made a dive for me as if he wished to gather me in his arms. But I eluded that anaconda embrace. I feared his then frame of mind would manifest too emphatic demonstrations. I shied around beside his wife, who was quite a comely woman, although she was so immense. I thought maybe she might want to take the contract to demonstrate their gratitude, but somehow she didn't seem so demonstrative or grateful.

"Say, Doc, how fur you gwine down this way?"

"I'm going to the city of Mexico."

"Jerusalem! You don't say so? Say, you stop wi' us a few days, can't you? I want to talk to you about Kaintucky. We come from the mountains of Kaintucky, an' we are a guine back there some o' these days, too."

"No, thank you, I'm compelled to go on now, but I hope to see you when you go back."

They got off at the next station, radiant with smiles and good wishes.

But to get back to my mutton, as the frog-eaters say, I struck the American and Canadian tourist party at San Antonio at the time proposed. I succeeded in being enrolled among the band of "friends and brothers," though with some apparent reluctance on their part, as the party was already two days old, and they had formed themselves into little exclusive cliques and circles, as large traveling parties always do.

As we remained in San Antonio five hours we availed ourselves of the opportunity of examining the quaint old town, which is slowly emerging from its Mexican traditions and customs and aligning itself with other American cities.

The tourist gets a foretaste of Mexico in many respects in this city. Of course the central feature to Americans here is the Alamo.

It seems that in 1836 the Alamo church and convent were included within a wall inclosing about three acres of land, and when Col. Travis, with his heroic little band, found himself inextricably surrounded by the Mexican army in overwhelming numbers, he retired within this enclosure, and when he could no longer hold that against such large odds

against him, he and the patriots retired to the church and there fought until the last man, including Col. Davy Crockett, of Tennessee, was killed. The number of dead Mexicans on and around them was several times their own number.

The church and part of the convent are in a fairly good state of preservation. It is built, as most of the houses are, with rough stones covered with a species of cement, simulating stone.

The country from San Antonio to Eagle Pass, at which point we crossed the Rio Grande into the Mexican Republic, is rather tame and uninteresting, looking like a great dead peach orchard. The surface is partially covered with mesquite scrubby trees and some grass, and unrelieved by hill, stream or any sign of animal life, except at the stations. At Porfirio Diaz, situated on the south bank of the Rio Grande, and named for President Diaz, we were the recipients of the first fruits of that gentleman's courtesy to us, for he had instructed the custom officers to pass us through without examining our luggage. The same courtesy was extended to us on our return, by the American custom officers at Eagle Pass.

Whether this was intended as a courtesy *per se*, or whether it was ordered to be omitted from a knowledge of the utter uselessness of detaining the train long enough to examine the baggage of a lot of men and women whose vocation would never give rise to the suspicion that they could ever have money enough to engage in contraband commerce, became an open question among the delegates, and they were rather undecided whether any thanks were due the two governments, or whether to view it in the form of a slight on account of their insignificance.

WIDAL REACTION IN THE DIAGNOSIS OF TYPHOID FEVER.

"During 1903 this test was made a greater number of times than in any preceding year, many specimens coming from Butler. Out of 6,341 samples, representing 5,508 patients, there was a discrepancy between the laboratory and clinical diagnosis in 6.94 per cent. Since 1897, 28,862 examinations of samples from 24,588 cases have been made. Among them there was a discrepancy of 4.9 per cent."

PLASTER-OF-PARIS.

"Rugh finds that plaster-of-paris never contracts on setting. On the contrary, it expands very slightly. There is no ground for fear that pressure sores can develop from the contraction of a plaster dressing."

PROGRESS IN DISEASES OF THE
EYE, EAR, NOSE AND THROAT.

Under the charge of ADOLPH O. PFINGST, M. D.

TRACHOMA AND SOME DISEASES RESEMBLING IT.

[By James A. Nydegger, M. D., Marine Hospital Service.—
New York Med. Journal and Philadelphia Med. Journal,
September 17, 1904.]

Nydegger calls attention to the prevalence of trachoma among those living in uncleanly and overcrowded conditions and believes that its predilection for certain races, as the Finns, Russian Jews, Arabs, etc., is accounted for mostly by their habits. The infectious nature of trachoma is recognized by the author, transmission from person to person through the intermediary of handkerchiefs or towels and by rubbing the eyes with infected fingers, being the common means of infection. Other diseased conditions of the conjunctiva are apt to be mistaken for true trachoma. A condition of the conjunctiva frequently seen, and one which is often taken for trachoma, is papillary conjunctivitis, or enlargement of the papillae of the conjunctiva. These enlarged papillae may show over a part or the whole of the tarsal conjunctiva of the upper lid. They give the surface the appearance of fine grained sand paper. This condition is usually observed in the eyes having high errors of refraction, or muscular disturbances.

Follicular conjunctivitis, which is frequently mistaken for trachoma, occurs mainly on the lower lid. The enlarged follicles are arranged in rows and are small and pimpish in color. They appear to be set up on the conjunctiva, while trachoma follicles are in the conjunctiva. The follicles in follicular conjunctivitis have a tendency to disappear in a short time, and they leave no permanent traces. In trachoma they are more persistent and cause scar tissue to form on the conjunctiva.

Trachoma follicles develop first principally on the lower lid and after some time extend to the upper lid, where they sometimes become very large. The granulations almost always cease with a sharp horizontal line over the upper border of the tarsal cartilage in the region of the anterior margin of the retro-tarsal fold.

The outcome is either in a discharge of the contents of a resorption of the contents of the follicles. In either case there is shrinkage of the granulation and a resulting scar. It leaves the mucous membrane with milky, stringy bands. This shrinkage produces entropion of the lids and frequently leads to trichiasis. Late

and serious complications of trachoma are pannus and atrophy of the cornea.

NON-OPERATIVE TREATMENT OF TRACHOMA.

[By Frank Judson Parker, M. D., New York Medical Record, September 17, 1904.]

The treatment of trachoma should aim to have a germicidal action on the infection and to restore the hypertrophied membrane to its normal condition. This can be accomplished surgically by breaking up and expressing the follicles and by non-operative treatment. The author believes that harm is done by indiscriminate operating for trachoma. It is of value only in selected cases, and should never be looked upon as a radical measure, but merely a means of shortening the time of medicinal treatment.

In the variety of trachoma in which there are small hard follicles, either alone or with the soft variety, surgery is not indicated, as the expression destroys considerable conjunctiva. He believes in the operation in all cases of well-marked follicular trachoma of the soft variety. Great importance should be attached to the general condition of patients undergoing treatment for trachoma. Proper feeding and outdoor life should be urged.

To avoid infecting others, those having the disease should observe carefully the following instructions:

1. They should have their own towels, handkerchiefs, wash cloths and toilet articles, and under no circumstances should they be used by others.

2. They should sleep alone.

3. Avoid rubbing or touching the eyes, as the contagion may be carried on the fingers and infect others through articles handled.

4. The hands should be cleaned often with soap and water.

5. Treatment should be attended to regularly and continued until pronounced cured by the physician.

In the local treatment nearly all of the astringents have been used. Nitrate of silver should be avoided, as it may lead to permanent staining of the conjunctiva. Parker gives the result of his own observations as follows:

"In the first and second stages of the soft follicular variety, I regard rubbing with a strong solution of bichloride of mercury (1-500) as a procedure to be highly commended, and the method of doing this is as follows:

"A hard cotton applicator is rolled and dipped in a 1-500 bichloride solution. After the eyes have been thoroughly cocainized, the lids are everted and the surface given a vigorous rubbing—especially in the folds of the upper lid, along the tarsal cartilage. This rubbing

is done three times a week, and the patient is directed to use iced cloths at home, if the reaction is violent, which seldom happens. The treatment that the patient is directed to carry out at home is the use of drops of some organic silver solution, night and morning. This treatment is continued until the conjunctiva is smooth. It is followed by a solution of tannic acid, 40 gr. to the ounce of glycerin.

"In the variety of trachoma in which the hard follicles are present, the one treatment that has stood the test of years, and still stands at the head, is the crystal of copper sulphate. A convenient form of using this is a crystal, ground smooth and mounted in a wooden handle. It should be applied to the conjunctiva with the upper lids everted, the patient looking down, so as to avoid contact with the corneal surface. The crystal is applied gently in the upper cul-de-sac and the same way in the lower. A solution is quickly formed by the tears. It is my custom to flush the eye with a boric-acid solution, removing the excess and relieving the severe pain which often follows this application. The frequency of the application is determined by the severity of the case. I have never used it over three times a week."

THE MODERN TREATMENT OF DACRYO-CYSTITIS.

[By Alfred Wiener, M. D., New York Medical Record April 2, 1904.]

Closure of the naso-lachrymal duct by inflammatory conditions causes an accumulation and stagnation of tears in the sac. Decomposition follows and finally being mixed with pus elements blenorrhoea is established. Such patients are apt at any time to develop a phlegmonous inflammation of the sac.

As soon as a stricture of the canal is suspected the puncta of the inferior canaliculus is dilated and the canal syringed. In this way it can readily be determined whether the stricture is complete, or whether some solution will pass through. If the case is of short duration and only a partial stenosis is present, a proper treatment of the nose, together with massage and syringing of the sac, will in a short time bring about a cure. If there is a true organized stricture, the author resorts to the method suggested by Passow, of Berlin:

This consists in a removal of the anterior portion of the inferior turbinated bone, its lachrymal process, together with the inferior turbinated crest on the superior maxillary bone, thus laying bare the membranous canal of the nasal duct. The nasal duct is then slit open up to the neck of the sac. The entire operation is accomplished intranasally, under cocaine in one or two sittings.

In cases of failure with this method, extirpation of the sac should be resorted to.

The operation of removing the sac completely is to-day, in experienced hands, a simple procedure. In the majority of cases no general anæsthesia is necessary. The entire extirpation can be done under the influence of cocaine and adrenalin, and without the slightest discomfort to the patient.

Although different operators perform the operation differently, they practically bring about the same results. The author describes the method as employed by him as follows:

"Make an incision, half moon-shaped in form, two and one-half centimeters in length, and about one-half a centimeter from the inner canthus of the eye. The incision is begun just above the internal palpebral ligaments. At first it passes only through the skin and subcutaneous tissue. The edges of the wound are now held apart by means of a Mueller's speculum. This answers the purpose of a retractor and assists very materially in controlling the hemorrhage. Should the hemorrhage be very profuse, then the use of the Axenfeld speculum, which holds apart the upper and lower edges of the wound, will be of great assistance. Now cut through the thin layer of muscle, then through the fibrous capsule, and one comes directly upon the wall of the sac. Often it may not be possible to distinguish between these various layers, especially in old chronic cases, in which adhesions have already formed from an extension of the process through the walls of the sac. If at all possible, and this can usually be accomplished if one is careful, do not open the sac, as a soiling of the wound with the contents of such a sac, may produce an infection, and thus delay healing. The sac is now carefully dissected out, with a dressing forceps and dull-pointed scissors. First the inner wall is separated from the groove with the dull point of the scissors, then the sac is cut off above from the canaliculi and the posterior wall is detached. Now, holding the sac firmly at its upper end, the external wall is separated and the sac cut off close to the beginning of the nasal duct. If the sac has been entirely removed, there will be left a perfectly smooth cavity representing the lacrymal groove. With a small curette establish a communication with the nose, through the nasal duct. This serves for the slight drainage of the wound, which is necessary. Now close the wound with three or four sutures, as is found necessary. Place upon the sutured wound a small roll of iodoform gauze, over this several layers of plain gauze, and then a firm pressure bandage. After two or three days the dressing is changed, and by the seventh day the healing is complete in a typical normal case. After three weeks it is almost impossible to

detect the area where the operative invasion had been made."

NEED OF MORE ACCURATE KNOWLEDGE IN THE DIAGNOSIS AND TREATMENT OF CHRONIC SUPPURATIVE OTITIS-MEDIA.

[By James F. McCaw, M. D., Watertown, N. Y. Medical News, August 27, 1904.]

The author believes that physicians are apt to regard chronic otorrhoea too lightly, instead of looking upon it as a serious condition from which grave complications may arise at any time. The disease in its insidious progress may destroy the delicate structures of the middle ear, invading the bony walls, and subsequently end in caries or necrosis. Extension to the mastoid cells and antrum may take place and intracranial infection, and death is possible. In many cases of chronic suppuration of the middle ear, careful examination of the nose and naso-pharynx and removal of obstructive lesions in these localities is important. It is also important to determine the location of the perforation and extent of destruction of the drum membrane, and whether or not thorough drainage is taking place. Whenever drainage is insufficient treatment based on general surgical principles should be instituted. The drum should be freely incised and any obstruction, such as masses of granulation tissue, should be removed.

In considering the prognosis of these cases we can be guided by the location of the perforation, the nature of the discharge, etc. A perforation high up usually signifies necrosis of the ossicles or involvement of the attic structures and little tendency to heal. Cholesteatomatous complication or an extension of the process beyond the confines of the drum cavity, indicate a very serious condition and call for radical interference.

The writer makes a plea to the profession to attach to this disease its proper significance and not look upon it as a condition unworthy of a most careful examination and investigation into the cause and extent of the trouble.

TREATMENT OF CHRONIC SUPPURATIVE OTITIS-MEDIA.

[By J. G. Huizinga, M. D., Grand Rapids, Mich. American Medicine, October 1, 1904.]

The first requirements to be fulfilled in the treatment of chronic suppurative otitis media are to maintain the patency of the Eustachian tube and keep the opening in the drum sufficiently large for drainage. Dilatation of the tube may be accomplished by forcing air into it through a Eutachian catheter at a pressure not to exceed twenty-five pounds, or by means of the Politzer bag, or Valsalva method. If the opening in the drum is too small it may be enlarged by free incision along its posterior

and inferior borders. Or, it can be destroyed entirely by means of a strong caustic. The next requisite of treatment is to obtain and maintain as nearly as possible a surgically clean condition of the entire auditory tract, which can be done by the following methods, given in the order of their preference:

1. By introducing a middle-ear syringe loaded with the cleansing solution, directly into the middle-ear through the perforated drum and forcing the solution through so as to make its escape at the pharyngeal end of the eustachian tube, which will be manifested by the patient hawking and spitting it up. This should be repeated several times.

2. By introducing an ordinary aural syringe loaded with the cleansing solution into the external auditory canal so that the point of it will be in close proximity to the opening in the drum; and then by the use of considerable force the fluid can in a large per cent. of cases be forced through so as to emerge at the distal end of the eustachian tube. Repeat it sufficiently often to obtain an aseptic condition.

3. Having tilted the patient's head to one side so that the direction of the external auditory canal will be upward, this canal is then filled with the cleansing solution. Then placing the ball of the thumb or finger tightly over the meatus, push down repeatedly until the fluid passes through. The result will be a sort of force-pump action. This is repeated several times until the patient will hawk and spit up the fluid. This method will often succeed even when the foregoing have failed.

Whichever method is employed, it should be preceded by thoroughly cleansing and mopping out the external auditory canal. The certainty of the results and the rapidity of the cure will be governed by the thoroughness with which the treatment is carried out. Here, as in the treatment of abscess in other parts of the body, everything depends upon the thoroughness of the surgeon, and not on the method. No dressing of any kind should ever be applied to the ear. The external canal should not be packed, but everything left wide open "to give the germs a chance to walk out."

There is a wide range of choice as to the drugs and antiseptics that may be employed. It makes little difference so far as the ultimate results are concerned, which ones are used so long as those employed are not too irritating, and will render the parts surgically clean.

SOME OF THE DIFFICULTIES TO BE OVERCOME IN
THE RADICAL MASTOID OPERATION FOR
THE CURE OF CHRONIC PURULENT
OTORRHEA.

[By Frank Allport, M. D., Chicago, Ills. New York Medical Journal and Philadelphia Medical Journal, October 1, 1904.]

The author recalls the fact that one-half of the brain abscesses of the world are the result of purulent tympanic infection, and that in the United States alone four thousand brain abscesses of otitic origin occur annually. He enumerates the chief objections which have been offered to the radical procedure for the cure of chronic suppuration of the middle ear, and tries to show that they are not as tenable as is generally believed.

Cases of aural suppuration, accompanied with symptoms of grave intracranial and constitutional complications are not considered, as the indication for operation in them is plain, but the question of operating in quiescent cases of chronic intractable tympanic suppuration is taken up.

The chief objection which has been offered to the radical mastoid operation in this kind of cases is the danger of producing a facial paralysis. This is due in most cases to greaking of the walls of the tympanic Fallopiian canal by probing, chiseling or curetting, and may occur to the most painstaking operator. However, these cases nearly always recover in a few weeks or months.

The danger of injury to the horizontal semicircular canal is another argument against the radical operation. This canal as well as the facial nerve, has a dense bony covering and consequently is not frequently injured. Then too they lie below the plane of proper chiseling procedures. The wounding of the sigmoid sinus, one of the dangers of the radical operation, is, in the opinion of the author, much exaggerated and even should it occur, the prompt use of the tampon will almost always control the hemorrhage.

Exposure of the dura covering the temporo spheroidal lobe of the brain is a danger in the radical operation which has also been overestimated, as there is little danger of infection in this way. The fact that the ultimate result of the operation is not always successful as to the cessation of the discharge has been argued against the operation, but this, in the opinion of Allport, is nearly always due to improper and insufficient operative procedures. The author believes that the vast majority of cases operated upon radically, emerge from the operation either with uninjured or improved hearing and that the objection which is frequently raised, of the possible bad effect of the operation upon the hearing has been very much overestimated.

THE RELATION OF DISEASE OF THE UPPER AIR
PASSAGES TO DISEASES OF THE STOMACH.

[By Lewis A. Coffin, M. D. The Laryngoscope, April, 1904.]

The author restricts himself to catarrhal disease of the pharynx and naso-pharynx. He quotes different authors to show that there is an intimate connection between derangement of the stomach and naso-pharyngeal catarrh. Not only do stomach disorders cause or exaggerate affections of the nose and throat, but the latter, by causing discharge of pus and muco-pus which is frequently swallowed cause attacks of gastritis. Coffin made a systematic study of a number of cases of post-nasal catarrh, with special reference to the condition of the stomach. In as much as the vault of the pharynx in children is studded with lymphoid tissue and indigestion might frequently be the cause of adenoids, fifteen children were included in the report.

Dr. Dudley Roberts made the examinations of the stomach used the double test meal in practically all cases. He examined the stomach contents in thirty adults suffering from chronic naso-pharyngitis, fifteen children having adenoids and five cases of atrophic rhinitis with ozena. The latter were included, not because they were supposed to be caused by the condition of the stomach but rather as a sort of control. For if the stomach is ever diseased by taking into itself nasal and post nasal secretions, it would certainly suffer in these cases.

Strange to say none of the cases with atrophic rhinitis complained of derangement of the stomach, nor was any detected by physical or chemical examination. In the fifteen children with adenoids, ten had decided superacidity of the stomach. Six of the ten showed chronic catarrh of the stomach. In five cases no abnormality was discovered. The author is convinced that indigestion, although not the only cause, is a frequent factor in the etiology of adenoid growths. Of the thirty adults examined with chronic naso-pharyngeal catarrh, twenty-four admitted more or less stomach trouble; of the twenty-four, twelve had a decided chronic catarrhal gastritis, with a low secretion of hydrochloric acid, the subjective symptoms being the belching of gas and eructation of sour fluids after meals. Six of the thirty cases showed distinct evidence of superacidity. The author believes that the throat trouble is the result of the stomach disorder, rather than throat affections causing derangement of the stomach. He bases his conclusions on the fact that the discharge from the naso-pharynx is usually expectorated. Even if it were swallowed it would hardly explain the diversity of stomach troubles encountered. Then again, if the

swallowing of mucus would account for stomach troubles we should find gastric and bronchial disease more often associated. The correction of stomach troubles often relieves the throat symptoms which is further evidence of the secondary nature of the throat trouble.

A CASE OF NASAL APROSEXIA; ASSOCIATED
WITH STAMMERING AND EMPYEMA OF
THE MAXILLARY ANTRA.

[By G. Hudson Makuen, M. D., Philadelphia, Pa. The Laryngoscope, April, 1904.]

Aprosexia, or the inability to do ordinary intellectual work, is classified according to its etiology into physiologic, neurasthenic and nasal varieties. The nasal variety is usually concomitant of adenoid vegetations in the vault of the pharynx and the resultant catarrhal condition of the nostrils. As there is a direct anatomic connection between the nasopharyngeal region and the cerebral cavity through the blood and lymph channels, the pathogenesis of nasal aprosexia can readily be understood. Venous stasis in the nose due to intra-nasal pressure, may readily extend into the adjacent cranial cavity and interfere with the normal functions of the brain.

Makuen's case occurred in a boy of fifteen years, well developed, but who had during the first four or five years of his life run nearly the whole gamut of infectious diseases. When four years old he began to stammer and has continued to do so with varying degrees of intensity, ever since. The boy, instead of being bright in his studies, as is the rule with stammerers, seemed unable to do anything that seems at all like mental or physical work.

He had no trouble in repeating what was said to him, but could not extemporize words and sentences without bungling them. He stammered mentally as well as physically. The patient had always had nasal catarrh, the turbinate bones were hypertrophied and the naso-pharynx bathed with muco-pus. Both antri were punctured through the inferior meatus and a considerable amount of pus flushed from them. The single flushing was followed by marked improvement in the general nasopharyngeal condition, the discharge stopped almost completely. Stammering continued, and the improvement in his mental condition was only slight. The author concludes from his observation of the case that the boy is aporexic and that he can never be quite cured of his stammering until he has been cured of the aporexia, and this condition in all probability depends largely upon his naso-antral disease.

HEMORRHAGE AFTER TONSILLOTOMY.

[By H. Jarecky, M. D., New York Medical Record, April 30, 1904.]

The author enumerates as the causes of hemorrhage after tonsillotomy, (1) haemophilia, (2) fibroid tonsils, (3) laceration of the blood vessels, (4) anomalous arteries, (5) wounding of the anterior pillars and (6) ulceration. He makes it a point to inquire into the condition of the patient and to refuse to operate if a condition of haemophilia exists. To avoid wounding the pillars of the tonsils they are separated from the tonsils with a blunt hook, otherwise hemorrhage is sometimes unavoidable.

Secondary hemorrhage is usually the result of ulceration.

Control of the Bleeding—The bleeding ceases usually spontaneously in a few minutes after the operation. If it continues, it must be stopped. In every case, even if an anæsthetic be required, the parts should be cleaned and a good view obtained, separating the pillars with a bent probe. This informs us of the character of the bleeding, as to whether it is capillary, venous or arterial, and measures can be adopted accordingly. Locally, for mild cases, ice, a paste of tannic and gallic acids, a saturated solution of adrenalin may be used. The perchloride of iron makes such a thick black mass, that I do not favor its use. Internally, suprarenal extract, ergot, or gallic acid can be employed. If the bleeding is severe in an unmanageable patient, a hypodermic of morphine acts often like a charm. If one or two vessels cause the trouble, they should be seized with a forceps or a tenaculum and twisted. If the bleeding is from the whole surface of the tonsil or venous oozing, the Paquelin or the galvano-cautery should be applied. Sometimes direct pressure with gauze-wrapped thumbs for about half an hour will stop the mischief. With some patients, highly excitable, vomiting, bleeding, it is very difficult to do anything—but here nature helps up—for, as soon as fainting takes place, the hemorrhage ceases. So, at times, it may be good to promote syncope, having the patient sit or stand. Sometimes the remaining stump can be drawn forward and encircled by a ligature, using a transfixion needle if necessary—or passing a purse-string suture around and drawing it together. A good method is to pass two ligatures from the posterior pillars, through the anterior ones, and tying each so that the tonsil is folded on itself or else makes a good recess in which to pack gauze. The tonsil hæmostat is an excellent instrument by which pressure can be made over the tonsil with one part and the other part at the angle of the jaw by means of a screw and then left *in situ*.

PROGRESS IN DERMATOLOGY.

By M. L. RAVITCH, M. D., LOUISVILLE, KY.

ECZEMA, PSORIASIS AND CANCER.

Modern dermatologists, both at home and abroad, are quite inclined to indulge in enthusiasm when they refer in glowing phrases to the "rapid strides" in skin diseases. New names, sometimes hardly pronounceable, have been coined for certain skin diseases. In the meantime such common diseases as eczema, psoriasis and cancer are as ever puzzling to the dermatologists. In regard to therapy of these diseases the modern dermatologist would have been not far off from the dermatologists of twenty-five years ago, if the X-Ray and light treatment had not come to his rescue. Very little advance in knowledge of these diseases has been obtained. Modern ideas in regard to etiology of these diseases are mere speculations, though some very plausible.

Let us review some of the new ideas of modern dermatologists in regard to eczema, psoriasis and cancer.

Brocq considers that eczema is to be regarded as a cutaneous reaction. Eczematous eruptions are produced by many and varied causes, and according to his predisposition so does an individual react to the various exciting causes to be met with. Chill, over-work, auto-intoxication, accidental intoxication, may bring on attacks of asthma, rheumatism, etc., or they may produce a cutaneous reaction, viz: eczema. In treating a case the physician must study the patient carefully in every detail. In an acute case he sees rapid results with milk and vichy diet, diuretics, copious enemas of boiled water once or twice daily, moral rest in a pure atmosphere, and suitable non-irritant local applications. In chronic cases he sees fine results from X-Ray and high frequency currents. In weeping eczema Lang speaks highly of the routine practice of reducing staphylococcic infection by applying biniodide of mercury solution 1 in 2000 on small pieces of lint to the affected parts. Afterwards the application of ointments or lotions has much more rapid results.

Psoriasis is held by many dermatologists to be a disease of a nervous origin. As a proof of a possible nervous origin of psoriasis, Bulzer, Faure and Beaulieu report a case which followed upon the shock of a man seeing one of his children run over. He had never had any form of skin disease before, nor had any member of his family. In association with this one recalls Dore's report of psoriasis following vaccination in three cases.

In my own case, a boy of 17, with extensive gyrate variety of psoriasis, the cause was traced to vaccination. The boy, according to the

best information obtainable, has developed extreme nervousness and psoriatic eruptions two months after having been vaccinated.

In regard to cancer theories, they are numerous. Morris says the coincidence between a large consumption of food and increase of cancer is too remarkable to be overlooked; and although it may possibly be no more than a coincidence, it none the less calls for an inquiry. Another modern dietetic influence is that of the chemical adulteration of food by so-called preservatives, which may very likely be responsible for much unsuspected evil, and the effects of which should certainly be made the subject of strict examination.

Crocker regrets that cancer researches for some years past have been directed too exclusively to microbes and too little to cancer; yet Plimmer, Behla and others believe in the parasitic origin of cancer. Behla believes that cancer is frequently conveyed by uncooked, infected vegetables. Dr. Lyon's figures with regard to cancer in Buffalo are also quoted as confirmatory of this idea. Statistics roughly showed that for the same population the cases of cancer in the German wards in Buffalo were double the number of those in the native, due, in Dr. Lyon's opinion, to the fact that the Germans were in the habit of eating uncooked vegetables. Felix considers that the important causes of cancer are traumatism, inflammation and irritation. He denies the existence of cancerous diathesis, except in so far as that in gouty subjects the depositions of urate crystals may determine cancer growth. He advocates the use of a caustic paste containing carbolic acid, zinc chlorate, iodol, etc., in preference to the knife. Regimen and diet are important in the prophylaxis of cancer.

Loeb has frequently discovered cancer in the eyes of animals. He states that it is not uncommonly found in the Chicago stockyards, where only two external carcinomata have been noticed elsewhere. The most plausible theory of origin of cancer has been advanced by Dr. R. Bell, of Glasgow, Scotland, in a paper read before the Fourteenth International Medical Congress held in Madrid. The essayist, refuting the parasitic theory of cancer, says:

"I am convinced that cancer, or rather the elements of cancer are present in every individual, whether it manifests its presence or not. My reason for making this statement is that I believe the cancer entity is, in its original state, a normal cell, which, from a combination of circumstances, has become altered in character and has assumed a new role of existence. It thus loses its benign attributes, and ceases to perform its functions in harmony with its surroundings, becomes aggressive and cannibalistic in its proclivities, prostrating, and

then preying upon its neighbors. In doing so, it procreates its species at an alarming rate of rapidity, and by its contact with the neighboring tissues, saps their vitality, and then destroys them when their power of resistance is thus reduced. The physiological condition of these normal cells is displaced by a pathological activity, terrible in its results. Speedily the disease process is conveyed by means of the lymphatics to distant organs, each of which becomes a new center, from which the mischief radiates."

The etiology of cancer being obscure, there is hardly any specific remedy for it. Surgical interference in operable cases, caustic pastes, electrical rays, both in operable and inoperable cases have been favorably reported on by the profession. According to Dr. Bashford, as far as malignant growths are concerned, other than rodent ulcers, the results so far brought to his notice of such treatments as the Finsen light, high frequency currents, and X-Rays, do not establish the efficiency of any of these measures as curative agents in sarcoma and carcinoma. Riehl, not denying the utility of X-Ray in malignant diseases, insists that radiologists should be trained dermatologists to begin with, and cancer and cutaneous affections which we are able to cure by other means, should not be submitted to X-Rays. In regard to radium as a curative agent for cancer, most dermatologists acknowledge that it has yielded no promise of general utility.

Investigations are in progress with regard to the possibility of a rational serum diagnosis and serum treatment.

IMPORTANT TO KENTUCKY MEDICAL STUDENTS.

As it is the intention of the State Board of Health to enforce its recently adopted regulations in regard to entrance examinations and other kindred matters without fear or favor, and as these regulations will apply to all who matriculate in any medical college in or out of this State after July 1, 1905, it is important that all Kentucky students who expect to be examined and attempt to qualify for practice here attend colleges which have signified their intention to comply with the regulations in every particular.

My information is that all of the Kentucky schools and most of those of the North and East will not only meet the requirements cheerfully, but that those of our own State will give the Board the same cordial support in this movement which they have always given to it in the past. It is because the Board is not advised as to what will be done by the schools of Missouri, Tennessee and

other states South and West of us patronized by Kentucky students that this note of caution is written. If they intend to comply with the requirements no possible harm can come from making the inquiry and if they do not our students are entitled to the information in advance of the complications in which they would involve themselves by matriculating in schools whose diplomas will not be recognized in their native State, and where they intend to locate. The cooperation of the profession is asked in giving this information to young men who have commenced, or who contemplate entering upon, the study of medicine.

J. N. M'CORMACK, M. D.,
Secretary State Board of Health.
Bowling Green, Ky., Dec. 1st, 1904.

PSEUDO-ASCITES AFTER CHRONIC ENTERITIS.

L. Tobler (*Deut. Archiv. f. klin. Med.*, Vol. 80, Nos. 3 and 4) has noticed that children suffering from chronic enteritis are frequently brought to the physician for an increasing swelling of the abdomen. If these emaciated patients are examined all the physical signs of free fluid in the abdomen may be obtained, that is, the skin is tense and shiny, undulation is present and movable dulness may be elicited. The symptom-complex strongly suggests tubercular peritonitis, yet the areas of dulness are liable to vary from day to day. If such patients are operated on there is generally not a trace of fluid in the abdomen. The condition is due to a relaxation of the mesentery, so that the intestines, filled with fluid contents, will sink to the most dependent portions of the abdomen.

THE PHYSICIANS WIFE.

A French medical journal—the *Journal des Practiciens*—is gravely discussing the sort of wife a physician should marry, and another, the *Reveil Medical*, has been conducting a symposium on the question whether a physician should marry at all. Boudoun, in his *Gazette Med. de Paris*, comments that work in the medical profession is one thing and marriage is another, and they have nothing to do with each other. He adds, however, that he is awaiting with interest the article, yet to be written, on the husband of the medical woman.—*Jour. A. M. A.*, Nov. 12, 1904.

PHYSICIANS IN CUBA.

"Physicians are scarce in Cuba; \$316,000 worth of patent medicines were imported during the fiscal year 1902-1903, mostly from France."

KENTUCKY MEDICAL JOURNAL.

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A MEDICAL LIBRARY FOR LOUISVILLE.

A doctor without books may well be compared to a mechanic without tools. While there are not lacking instances where men remote from seats of learning have done epoch-making work in medicine as well as in mechanics, it is nevertheless true that the comparatively few sporadic cases of the sort merely prove the main proposition. The way to obtain the best results in any mechanical sense is to call on the best appointed shop—the shop with the fullest complement of tools and appliances the especial product requires; and for the doctor to render the best his profession or his science enables him to do requires close contact with the working men and minds in medicine, not only of the present, but of the past. Without a good reference library at hand and which is properly used, no ordinary man can do either the one or the other of these two essentials of medical practice or writing.

The conditions have finally arrived in this city when the foundation for a medical library may be laid on broad and sufficient grounds, a medical library in keeping with the medical pretences of this city as a teaching center. Libraries are not made, but they grow. They are not Minerva-like, bodies which spring full-fledged from the printing presses or the book-sellers, but they develop by slow accretion and are good or worthless as the governing body exercises a proper judgment in the selection of its material.

The establishment of the Louisville Free Public Library on the broad lines which its promulgators announce, gives at once a home for a medical library, on which a creditable superstructure may arise. It is now "up to" the medical profession, collectively and individually, to show how much in earnest they are in the matter of obtaining a good working reference library.

By the individual contributions of books and periodicals, by the active aid of the various societies, and especially of the Jefferson

county society, which ought to include the membership of all local societies, the writer feels that every effort on the part of the profession will be met more than half way by the Library body itself, and this great desideratum of the local profession will in time come to exist.

The practical question which presents itself is this: What is the best method whereby books and periodical publications can be secured for this department of the Louisville Free Public Library? The library authorities give assurances of the most friendly good will to this department, but, at the same time, state that the funds at their disposal will prohibit the expenditure of any large amount yearly for the buying of medical books, for the present at least, or until such time as the income of the library may justify a more liberal expenditure. It therefore remains for the physicians themselves to organize a Medical Library Association whose purpose it shall be to solicit subscriptions from the physicians of the city of Louisville in sufficient amounts to insure the proper yearly accretions to this department. The first step has already been taken by the appointment of a committee by the Jefferson County Medical Society, which has instructions to confer with committees from the other local societies, with the object of forming a Medical Library Association, as above outlined. It is confidently believed that a large number of our physicians will be found willing to make subscriptions of from \$5.00 to \$25.00, so that the total amount realized yearly, while not by any means adequate, will at least be sufficient to insure the obtaining of the more important books of reference as well as the principal periodicals. It will certainly appeal to physicians who feel the necessity for frequently consulting the latest books of reference, that the medical library will prove to them a great economy. Being centrally located it will be almost as easy of use as the private libraries and for a few dollars per year the donor will secure the privilege of consulting many hundred dollars' worth of books. From the economical standpoint alone then, the proposition should appeal strongly to us all.

A considerable number of books and periodicals should also be donated by physicians, as many volumes exist in libraries in Louisville and all over the State, which are of no practical benefit to those holding them, and which are gradually being lost by decay and neglect. All such books would find a proper and fit home in a public library, which is really the only place they are of any use at this time. *The Kentucky Medical Journal* will hold itself ready at all times to take charge of any books and periodicals which physicians will

donate to the library, and requests that such prospective donors will communicate with it in regard to the matter.

The *Journal* is now making arrangements with several publishing houses to carry their advertisements, the fees for same to be taken out in medical books from their respective catalogues, which are to be donated to the Louisville Free Public Library. It is to be hoped that other journals will adopt this same plan, as in this way a very substantial service can be rendered to the physicians of the city and to the medical department of the Louisville Free Public Library.

MEDICAL ADVERTISING.

In the July issue of the *Kentucky Medical Journal* notice was given of the tentative formation of the American Association of State Medical Journals. The preliminary articles of association contained the following: "This Association makes the following declaration in regard to advertisements: No State Medical Journal shall accept an advertisement of a medicine which is not ethical. To be ethical in the meaning of this declaration, the product advertised must have published with it, not only the names of its constituent parts but also the amount of such constituents, so that a definite dosage can be determined. Further, such product must not be advertised to the lay public through the secular press."

The *Kentucky Medical Journal* stated at that time that its columns were not free of advertisements which were not up to this standard, but it pledged itself to eradicate all objectionable advertisements as soon as possible, and for the future not to receive any advertisements which were not up to the standard set in the Articles of Association of the State Medical Journals. The *Journal* is happy to report that with its December issue its pages appear free from all unethical advertisements, and, as before promised, they will so remain for all time to come.

This, of course, will mean the sacrifice of many dollars' worth of advertising business, but the *Journal* feels that when a principle is in issue the mere question of dollars and cents should cut no figure with the representative of the great body of medical men of the State of Kentucky, or of any other State.

The American Medical Association in its principles of Ethics declares that "It is equally derogatory to professional character for physicians to dispense or promote the use of secret remedies." This declaration has been adopted by the California State Journal as the slogan for its advertising pages, and the Kentucky Medical Journal knows no better

battle-cry, and so follows the lead of the enterprising journal of its sister State.

We believe that the effort to be decent in this matter, scorning the mere question of money to be made from medical advertising, will appeal to the constituents of the *Kentucky Medical Journal*, will appeal to manufacturers who who expend both labor and money in the perfection of products which are both useful and ethical, and, above all, we hope it will appeal to the publishers of all medical journals, but especially those which are under the control of the State or National Medical Associations. Certainly nothing can be more incongruous than to preach principles of ethics in the reading columns of a journal and then give the lie to all pretenses of decency and propriety in the advertising pages of the same journal.

HELPFUL BACTERIA.

The popular conception is that all the minute organisms included under the generic term bacteria, are either directly harmful or indifferently and passively harmless. That some varieties belong to neither of these classes but are actually helpful to man is testified to by G. H. Grosvenor in an interesting article entitled: "Vaccinating the Ground", in the *Century Magazine* for October.

Since very ancient times it has been known to agriculturalists that, after a crop of peas, clover, alfalfa, or any of the various leguminous plants, a larger yield of wheat and other cereals could be obtained. But the reason that certain plants enrich the soil while others exhaust it, remained a mystery until an inquiring German discovered some years ago that peas, beans, etc., obtain their nitrogen food, not from the nitrates of the soil, as do the cereals, but from the free supply of nitrogen in the air. The atmosphere all about us contains seven-tenths of free nitrogen; heretofore man has not been able to tap this exhaustless supply and convert it to his uses by turning it back into the soil. Nitrogen is taken from the soil by the agriculturalist so much faster than it can be put back in the form of various fertilizers that large areas have already been rendered practically non-productive. This is notably the case in many of the New England farms.

Our German friend found that the leguminous plants absorb from the air much more nitrogen than they can use, the surplus being left with the roots in the soil. Further investigation into the mechanism of this process disclosed the fact that these varieties of plants have small rounded bulbs, or nodules, on their roots, varying in size from a pin head to clusters as large as a good sized potato. It was observed that plants with good sized nodules flourished, while plants with small ones, or in

which they were entirely lacking, looked starved and puny. The conclusion was therefore reached that these nodules bore some relation to the vigor of the plants. Dissection of a nodule and examination under the microscope showed it to be packed with bacteria, and it was finally demonstrated that these bacteria had the function of constantly absorbing free nitrogen from the atmosphere and converting it into forms suitable for plant use. These organisms are called nitrogen-fixing bacteria.

Without going into the matter at greater length, suffice to say that an American, Dr. George T. Moore, of the Department of Agriculture, has perfected a method for propagating these bacteria and for distributing them to the agriculturalist. Packages for distribution are made by drying the cultures on cotton, and then compressing the cotton into cakes. Each cake is capable of inoculating from one to four acres of ground; the package is so small that it can be carried in the pocket, yet it does more work than several cart loads of fertilizer. A cake costs the government less than four cents, or one cent per acre, and saves the farmer thirty or forty dollars, which he would have to spend for an equal amount of fertilizer.

The process of inoculation is either by soaking the seed, before sowing, in a solution containing the bacteria, or by mixing the bacteria with soil, sowing the soil on the surface of the ground, and then working it in before planting the seed.

The statements of the increase in yield after vaccination are most astonishing. Not only is the crop of legume greatly increased but the rotating crop following also reaps the benefit. Thus a crop of crimson clover, not inoculated, added to an acre of ground 4.3 pounds of nitrogen, while a crop of crimson clover, inoculated, added to a precisely similar acre of land 143.7 pounds of nitrogen.

Cotton planted after an inoculated crop of red clover gave an increased yield of forty per cent. Potatoes, after an inoculated crop, yielded an increase of fifty per cent.; wheat increased forty-six per cent., oats three hundred per cent., and rye four hundred per cent!

A PLEA FOR PURE WATER.

The universal drought and the prevalence of typhoid fever in this, and other sections of the State this Fall, prompts me to say a few words in regard to the duty of the profession to the laity in educating them to realize the grave importance of pure water and other sanitary laws.

The vocation of the physician is not limited alone to the narrow confines of curing the sick,

but embraces a much nobler and more far-reaching work—the prevention of disease and the prolongation of life. It is the imperative duty of every physician, if he has any exalted appreciation of the aim and ends of his calling, or realizes the high and noble functions of his sphere as the destroyer of pain and suffering and the creator of health and happiness, to aid in arresting those evils, sanitary and moral, physical and mental, within the reach of science, which are detrimental to health and dangerous to life. The scope of observation with all intelligent physicians should be, not only an investigation of the essential causes that produce the various diseases, but as the protectors of public health, as faithful sentinels on the watch tower guarding against the inroads of disease and protecting the outlets of life they should be stimulated, in view of the fearful responsibilities of their calling, to employ all the resources of judgment and reason in fulfilling their sublime mission.

The public in general is not only blindly ignorant of the laws of health, but wilfully indifferent to an acquaintance with them.

We daily see lamentable proofs of these facts not only in the personal habits, vices and surroundings of the poor, but also in the dissipations, dress and dwellings of the rich; not only in the cities with their filthy streets, sewers and polluted water supply, but in the country with the malarious swamps, stagnant pools, old wells and springs that have the benefit (?) of acres of surface drainage.

The people as yet have not been educated to appreciate the dangers of violating the laws of health in using impure food and water.

Concentrated action of the whole medical profession in educating and warning the people will help remove such existing evils as experience has proven to be injurious to the public health.

One of the principal causes of the ill health of the country resulting in disease and death is impure water. Water is among the chief of man's everyday wants, it is next to air in importance, but pure water to the great masses is a rare luxury scarcely obtainable. The sources of our water supplies is one of the most interesting subjects presented to the people for consideration, and yet it is true that the matter never receives attention until by force of circumstances it can no longer be deferred. In the country and in towns not supplied with water works, wells and springs have been the chief sources, but they are unreliable in the extreme, and must eventually be abandoned in consequence of the contamination of the soil inextinguishable upon the causes constantly at work therein.

The earth must sooner or later, depending upon circumstances, become saturated with

filth. The contamination of closets and sewers with surface drain render every well or spring a receptacle only for filthy water. When we remember that a well drains a cone shaped area, the diameter of whose base on the surface is anywhere from one to two hundred times the depth of the well we know that it is almost invariably placed within the drainage of some filth bearing spot. A very little exercise of the imagination will suggest how impossible it is to have or expect pure water with the close proximity there exists between our wells and the sources of contamination alluded to. The well, cess-pool and closet frequently stand but a few feet apart and the surface is eminently capable of draining more or less of its contents in addition into the sources whence we derive one of the essentials of life.

Almost every locality furnishes abundant examples of impure water dependent upon some peculiarity of rock or soil. Many wells and springs are in consequence of some geological peculiarity evidently nothing more than receptacles for surface water which has percolated without filtering through fissures in the earth or rock. This difficulty exists especially where we have a clay formation.

Clay is as impervious to water as rock. The cemented cistern, if kept clean and carefully filled, furnishes the purest water, but where any doubt exists as to the purity, it should be boiled.

J. E. WELLS.

Cynthiana, Ky.

EDUCATIONAL OVERPRESSURE.

As a rule any mention of matters pertaining to the management of public schools by doctors, is apt to be resented not only by teachers, principles and superintendents, but by school boards as well. Last spring the writer stirred up quite a little hornet's nest by writing an article for a local paper on the prevention of the spread of contagious diseases in the public schools and advocating the importance of daily medical inspection by a properly appointed and properly paid medical inspector. The medical inspector was not appointed, but that the article was productive of good was manifest by the increased activity of the Health Board and the more careful inspection of suspicious cases by the teachers themselves. At the risk of incurring adverse criticism I make the assertion that educational overpressure is to an appreciable extent menacing the health of both pupil and teacher. This being true it becomes the duty of the medical man to call a halt and to preach to a well-meaning but deluded generation the gospel of prudence and moderation even in respect of such good things as the acquisition of knowledge and the training of the intellect.

In discharging this duty, however, the medical profession will have much opposition and many difficulties to overcome, with perhaps a gentle reminder that it should confine its attentions to the legitimate business of inspecting tongues and prescribing for fevers. Education has been long and loudly extolled as the panacea for all the diseases and disorders of the body politic, and an idea has gone abroad that the influence is wholly benign; and to many, therefore, it will sound like rank blasphemy to hint that this supreme remedy covers a hidden poison; and that, if rashly or indiscriminately applied, it is as likely to kill as cure. There are a large number of persons interested in the maintenance and extension of our educational system, and their prepossessions will unconsciously incline them to listen to everything that is to its advantage, and to turn a deaf ear to all complaints that are made against it. They will defend the *status quo* with ingenuity and tenacity, and the assaults of the doctors they will endeavor to fight out on the ground of statistics. We must not allow ourselves to be lulled into inactivity by the soothing assurances and optimistic dreams of ardent educational reformers, backed by a magnificent array of tables, but must keep constantly in view the fallacies which underlie vital statistics, and the possibilities of honest but interested manipulation. We must set a statistician to catch a statistician, and warn the public to receive with reserve the statistical demonstrations which will be submitted to them, proving that reading, writing and arithmetic are the tripod on which health rests, and that the most highly educated children are always the soundest in body and mind. It has ever been the rule that medical opinion has been in advance of statistical demonstration. Had Jenner waited for statistical evidence of the efficiency of vaccination in preventing smallpox, humanity might never have enjoyed the boon. He trusted to his own observations and experiments and reasoning, and so to-day, medical men come forward with no formidable phalanx of figures to support their allegation, but with sufficient experience to justify it, declaring that inordinate and ill-directed education is working havoc amongst the rising generation, and that a stern penalty will have to be paid hereafter for the physiological improvidence of to-day.

They have seen healthy children grow sickly under the pressure of school tasks, and revive again when these were interrupted. They have seen clever children turn dull and stupid under the burdens laid on their sprightly, but immature minds. They have seen delicate and badly-nourished children break down altogether under their work, and die of

school-bred brain disease. Their professional experience convinces them that educational pressure is being applied injudiciously, in the attempt to make the weak keep abreast with the strong, and that young, tender, growing nervous systems cannot, without detriment, pass through the educational ordeals that are now required of them. They see true education lost sight of in a confused turmoil of forcing, of examination and cramming, and they would be culpable if they did not protest against the pernicious system in vogue.

ARCH DIXON.

Henderson, Ky.

THE X-RAY IN ITS PROPER PLACE.

A little more than two years ago the medical world was startled by the reports of what had been accomplished in the treatment of malignant disease in its various forms by means of the X-Rays. Many apparent cures of hopeless conditions were cited. These first reports were in the main from men of unquestioned honesty in the profession. A short time elapsed and the journals were flooded with reports of many remarkable "cures". Certain it is that the coil builders for a time reaped a harvest. Many put "machines" in their offices who did not know "a negative pole from a telegraph pole" and probably don't yet. Probably eighty per cent. of these cases reported cured have now recurrences or have passed to the great beyond.

Now where do we stand in regard to radiotherapy? What cases should be submitted to this method of treatment and what to other, and more radical measures? Unquestionably many patients have lost valuable time, and this to them was more than time, in some instances I fear life, by being submitted to X-Ray treatment when clearly the knife was indicated.

Why submit a patient with carcinoma of the breast to this slow process which promises so little, maybe harm, when a thorough amputation promises so much?

The same can be said of cancer of the lip, where excision is followed in many instances by complete cure.

It would be hard in a short space to cover so large a subject, but it would be a safe rule to never submit a primary malignant neoplasm, and by this we mean a tumor of any size, to this form of treatment. It will remove a small tumor in many cases, but isn't the danger of metastasis greater than by extirpation? Be it far from the writer's intention to reflect on the value of the X-Ray in its proper place. After some experience in this work he is of the opinion that it has a very

valuable place and in many conditions it is the best form of treatment that we have.

In some epitheliomata, especially in that variety that partakes of the nature of an ulcer rather than a neoplasm, it is probably the best form of treatment. Particularly is this true as regards the face. In many instances it has cured in epitheliomata when all other methods have failed. In many skin diseases it is of the utmost value. In lupus it is probably second to the Finsen light. It certainly should be used in many recurrences, for if it does not cure it will often relieve pain, prolong life, and make death easier.

In incipient tubercular joint diseases in children and in many other cases of surgical tuberculosis the results are sometimes almost startling. This then is a plea for the X-Ray in its proper place, but may it never be used simply because the patient wants to avoid surgery, when surgery should be done.

THOS. L. BUTLER, M. D.

Louisville, Ky.

COUNTY SOCIETIES.

[Secretaries of county societies are requested to furnish for this column, and without further notice, all county society news of interest, such as the date and place of the monthly meeting, notice of death and marriage, epidemic disease, and, in fact, everything which might be of interest to brother practitioners in the State.]

The meeting held by the *Bourbon County Medical Society*, as announced in the circular letter and invitation, was held at the appointed time and was an unusually interesting and profitable one. The attendance was excellent and the interest manifested very propitious for our society. The paper of Dr. Frank H. Clarke, of Lexington, on "Medical Ethics," was a gem and elicited extended discussion and unlimited praise.

Dr. Silas Evans touched upon the very important "Relations of the Health Officer," especial attention being given to the water bovine disease, typhoid fever, and the contagious diseases, diphtheria, scarlet fever, and smallpox.

Dr. Frank M. Faries' paper on "Pauper Practice," discussed the very important question of "What constitutes a pauper; the best way of handling paupers, and the methods of paying for the medical care of paupers."

Dr. Frank Fithian's paper on "Fees," dealt with a schedule for the government of the local charges which should serve as a guide rather than be obligatory or be further "*casus belli*."

The attendance at the dinner and smoker and the general good feeling prevalent, make

us feel hopeful for the *Bourbon County Medical Society* in the future.

C. G. DAUGHERTY, Sec'y.

* * * * *

The *Hardin County Medical Society* met at the Court House in Elizabethtown, October 13, 1904. The meeting was called to order by the president, Dr. J. W. O'Connor. The following members were present: Drs. J. W. O'Connor, W. J. Shacklett, S. N. Willis, C. Z. Aud, F. P. Strickler, J. R. Gray, J. C. Tarpley, S. T. Hubbs, J. N. English, C. W. Rogers, J. S. Howell, J. C. Mobley, C. C. Carroll, and H. R. Nusz.

At the morning session Dr. W. J. Shacklett read a paper on "The Value of Drugs, and Some Causes of Failure."

The afternoon session was consumed in the reading and discussion of Dr. C. W. Rogers' paper on "Typhoid Fever."

The president appointed Drs. J. R. Gray and C. C. Carroll to read papers at the November meeting.

The society adjourned to meet at Elizabethtown, November 10, 1904.

H. R. NUSZ, Sec'y.

* * * * *

The *Hardin County Medical Society* met at the court house in Elizabethtown, Thursday, November 10th. President J. W. O'Connor in the chair. The members present were: Drs. F. P. Strickler, J. C. Mobley, J. R. Gray, T. M. Nimmo, J. M. English, J. W. O'Connor, D. C. Bowen, J. D. Howell, C. Z. Aud, J. V. Prewitt, C. C. Carroll and R. R. Nusz.

The morning session was taken up with the report of cases.

At the afternoon session Dr. J. R. Gray read a paper on "Influenza." Dr. C. C. Carroll read a paper on "Bronchitis."

No essayists were appointed, as the society will meet jointly with the Muldraugh Hill Medical Society Thursday, December 8, 1904.

H. R. NUSZ, Sec'y.

* * * * *

The *Henry County Medical Society* met in New Castle, Monday October 31, 1904, with the following members present: J. C. Casity, W. L. Nuttall, C. R. Morton, O. P. Chapman, W. T. Coblen, Louis Coblin, and C. R. Johnson.

Dr. W. T. Coblin presented a paper on "Dysmenorrhea," and the remainder of the afternoon was taken up in the discussion.

JOHN P. NUTTALL, Sec'y.

* * * * *

The *Monroe County Medical Society* met at the Clancy House, Tompkinsville, Ky., Thursday, October 20, 1904. Eight members

were present. Dr. Palmore reported four cases of membranous croup seen since the last meeting, all of which resulted fatally.

The papers of the day, "Sciatica," by Dr. England, and "Dental Advice to the General Practitioner," by Dr. Ray, were highly complimented.

The program for the next meeting is as follows:

"Croup," by Dr. Bedford.

Quiz on "Conduct of Labor Case," by Dr. Duncan, with general discussion following.

Dr. Irvine Jones is to prepare a paper on a subject of his own selection.

The society adjourned to meet at the Clancy House, Tompkinsville, on November 17, 1904.

E. E. PALMORE, Sec'y.

* * * * *

Trimble County Medical Society. For the mutual convenience of the physicians in our county our medical society meets alternately in Bedford and Milton on the third Monday of each month as follows: In January, March, May, July, September and November at Bedford. In February, April, June, August, October and December at Milton.

The October meeting was held at Milton, Ky., in Dr. Harwood's office. We had a good attendance. Dr. Hampton, of Carroll, Ky., and Drs. Lewis and Deny, of Madison, Indiana, visited the society.

Dr. George Gaines, of Milton, Ky., read a paper on "Symptomatic Diagnosis." Discussion by Drs. Harwood, McMahon, Contri, and Hampton.

The society adjourned to meet in special session at Bedford on Thursday, November 10th., when Dr. J. G. Cecil, of Louisville, Councillor for the Fifth District, expects to visit our society.

November 10th, 1904. The *Trimble County Medical Society* convened in special session, Dr. Harwood presiding. Only a few present. Dr. Cecil entertained the doctors with very interesting and useful suggestions.

L. G. CONTRI, Sec'y.

* * * * *

The following letter brings good news of interest of new organization from the Eleventh District:

Dr. James B. Bullitt, Sec'y,
Louisville, Ky.

Dear Doctor:

On Monday, November 7, I visited Manchester, Clay county, Kentucky, and organized the Clay County Medical Society, six out of seven of the registered physicians in the county being present.

We met in the office of Dr. Anderson and made permanent the organization which had been begun several weeks before. Dr. Critten-

den Couch was made president and Dr. Anderson was elected secretary-treasurer. Every one present seemed to be greatly interested and anxious to do his part to make a successful society. I had written the two registered physicians of Leslie county, Dr. Ray and Dr. Lawrence, and asked them to meet with us, as they did not have enough registered physicians to organize. They were not present, but I hope to get them into the Clay County Society very soon.

Dr. Anderson left on the following morning for St. Louis, and will be away some ten days or two weeks. When he returns he will make application for charter, etc.

The society will meet monthly on the third Wednesday, at two o'clock p. m. I think the physicians of Clay county are thoroughly in earnest and that they will continue to keep up the work and will have a good society which will be of great benefit to them.

Respectfully,

J. S. LOCK,
Councillor Eleventh District.

TRYPANOSOMA DISEASE IN MAN.

The organism known as *Trypanosoma* has for some time played an important role in animal pathology, and isolated cases of this infection in man have been observed for two years. It is now generally conceded that there are two distinct forms of the disease, depending on the localization of the germ; trypanosomiasis proper and the sleeping sickness of negroes. In a case of the former, observed by A. Gunther and C. Weber (*Munch. med. Woch.*, June 14, 1904), the chief symptoms were: A chronic course extending over years, recurrent periods of irregular fever, gradual loss of strength and anemia, local transient edema, a peculiar affection of the skin, swelling of the liver and spleen, increased pulse, occasional dyspnea and an irritability of the vascular system. The skin manifestations were irregular, red spots on various parts of the body, which disappeared on pressure. An absolute diagnosis can always be made by finding the worm-like parasite in the blood during the febrile period. In addition, the blood may be injected into rats and apes, which are very susceptible. The leucocytes are generally diminished with a relative increase of the mononuclear elements.

PAINFUL OBESITY.

Three new symptoms have been added by B. Schwenkenbecker (*Deut. Arch. f. klin. Med.*, Vol. 80, Nos. 3 and 4) to that peculiar condition known as *adipositas dolorosa*: general muscular weakness, physical anomalies

and hemorrhages. Since the obesity is general, the disease should not be confused with painful lipoma. Very often a diagnosis of rheumatism or hysteria is made, as the patients may look well, yet constantly complain of pain. The treatment calls for rest in bed, followed by baths, massage, exercise and anti-fat diet. The only lesions which the author could find in excised portions of the skin were an abnormal increase of fatty tissue in the cutis. Probably this infiltration, together with the stasis of blood and lymph, is responsible for the pain. In some cases lesions of the thyroid, hypophysis and of Goll's tract were found, but it is doubtful if they bear any etiological relations to the disease.

ENCOURAGING BIRTHS.

Editorially, the New York Times says in part: A number of estimable women have incorporated in Massachusetts an insurance company designed to encourage motherhood by paying to policy holders a premium on the birth of children. The assured pays \$3 initiation, \$1 annual dues, and \$3 a month assessments. After 10 assessment payments, aggregating with the initiation fee \$34, the assured is eligible to receive on the birth of a living child a cash payment of \$200; after the nineteenth payment, \$300; after the twenty-eighth, \$400; and at any time after the thirty-seventh, \$500. Just how the arithmetic of the financial plan works out we do not know.

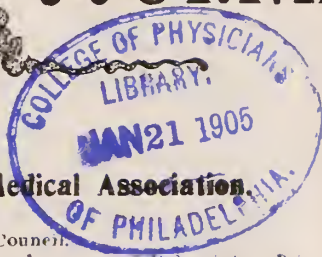
COLLODION DRESSING FOR INTRANASAL SURGERY.

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PARADOXICAL PHLEBITIS.

"Moreau and Duroux ask why infected varicose veins should appear in the lower extremities after operations on other parts of the body and cite two cases of operations for inguinal hernia in which the phenomenon supervened. They believe infection was carried through the epigastric veins with which anastomose the obturator veins. The spermatic veins and the lymphatic system may have acted as channels. The writers think there was an antecedent latent varicosity predisposing to infection."

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THE ENZYMES OF THE BLOOD.*

By DANIEL J. HEALY, M. D., LEXINGTON, KY.

Of all the phenomena which are associated with the presence of life, that of fermentation in its broader sense, that is, the decomposition of the complex molecules, frequently accompanied by the assimilation of one or more molecules of water, is inseparably connected with the presence of ferments either organized, for example, the various microorganisms, or unorganized, that is the enzymes, and it is to a consideration of the latter that this paper shall be restricted.

By an enzyme is understood any chemical or hydrolitic ferment as distinguished from organized ferments, as yeast.

Reynolds Green defines fermentation as "the decomposition of complex organic material into substances of simple composition by the agency, either of protoplasm itself, or of a secretion prepared by it." The fact that the greater number of instances of fermentation may be found in the yeast and the great group of microorganisms led to the original opinion that these were the only ferments, and thus they were classified as distinct biologically from the higher plants. This, however, has been quite disproved by the discovery that many of them cause fermentation by means of enzymes, which can be prepared and separated from them with almost as much ease as from the higher plants.

There are two processes of fermentation which it will be convenient to call attention to here. First, that in which the protoplasm is directly involved; this process is intracellular. The complex substance, usually a food material, but may for example be a microorganism, is absorbed into the cell; an enzyme is secreted there, and the transformation follows. Thus in the digestive processes of certain unicellular animals, the digested food has been found, soon after its absorption, to be surrounded by a vacuole containing an acid liquid, and has been seen to dissolve gradually under the influence of the contents of this vacuole, in just the same way as similar food material can be digested by artificial gastric juice. Second, many cells after forming the enzyme excrete it into the surrounding medium, where it brings about decomposition,

the products of which are subsequently absorbed by the organism. Thus the distinction which was formerly drawn between organized and unorganized ferments is seen to be misleading.

In regard to the nature of enzymes, certain general features can be ascribed to them in common, though they present great differences among themselves. Their possible, or probable, composition is but very vaguely understood, as we have no criterion of their purity, nor indeed any satisfactory test for their existence except the demonstration of their powers. Their activity is largely dependent upon temperature, being held in check by low temperatures, reaching its maximum point between 30 degrees and 50 degrees C., and being completely destroyed by temperatures approaching 100 degrees C. They do not themselves enter into the reactions which they set up, but cause those changes without undergoing any alteration. Again, they are not destroyed by their own activity, the energy which they display not apparently proceeding from any decomposition. They show a peculiar sensitiveness to the environment in which they find themselves, and are peculiarly influenced by the reactions of the solution in which they are working; nor is their activity alone affected, for slight alterations in the composition of the medium will frequently result, not only in the stoppage of their activity, but even in their destruction. Their activity is in all cases lessened and finally paralyzed by the presence of an excess of the products which they form.

Reynolds Green classifies the enzymes into the following groups:

1. Those which transform insoluble carbohydrates of various kinds, ultimately producing sugars—such are diastase, inulase and cytase.
2. Those which transform sugars of the more complex types into simple ones—such as invertase, glucose and others.
3. Those which decompose glucocides, giving rise to a form of sugar, together with aromatic bodies—such are emulsions, myrosin, and others.
4. The proteolytic group, whose members decompose various forms of insoluble proteins—such are pepsin and trypsin.
5. The clotting enzymes, which produce,

* Read before the Kentucky State Medical Association, Lexington, Ky., May 18, 1904.

from various soluble bodies, by a coagulation of liquid in which they are dissolved, jelly-like substances. In this group are placed rennet, which coagulates milk, thrombose, which plays a part in the coagulation of the blood, and pectose, the leading factor in the formation of vegetable jellies.

6. Lipase, the enzyme which decomposes oils and fats.

7. The oxidases, which assist in the oxidation of various substances; among them laccase and tyrosinase.

Enzymes are widely distributed in nature. Diastase, lipase, trypsin and others have been found in nearly every living cell, both animal and vegetable, and it has been said that, "wherever life exists there also occurs the enzyme." The manner in which enzymes are secreted is best described by Heidenhain who studied the appearances presented by the pancreatic cells under different conditions of nutrition. In the case of a dog which had been fasting for more than a day, each cell was seen to consist of two zones; one which abutted on the lumen of the alveolus, and one at the back of the cell towards the basement membrane. The inner zone was considerably larger in area, and was studded with fine granules. The outer zone was narrow and its substance was clear. The nucleus of the cell was shrunken and corrugated, and was found at the border of the two zones. In the pancreas of another dog which was killed during full intestinal digestion, the same two zones were evident, but the clear outer one was much wider, and the inner granular one was contracted, the granules being much less numerous. The size of the cell was less while the nucleus had regained a spherical shape, and was nearly central in position. A third pancreas excised at the time when digestion had ceased, showed the outer zone again diminished and a marked increase in the granularity of the inner zone. From these observations it was inferred that the granularity was very probably connected with the presence of the enzyme, which appeared to be formed during the period of rest and extruded from the cell during that of activity.

Gardiner distinguishes four periods in the act of secretion:

1. One antecedent to secretion, when the cells are in the resting condition.
2. A period during which the secretion is formed and extruded from the cell.
3. A time when absorption of the digested material is effected.
4. A period of recovery.

Though in some cases we are able to associate the secretion of enzymes with the formation of coarse granules in the cells, it by

no means follows that the granules are the ferments. In fact it has been demonstrated that this is not the case. The extract obtained from a pancreas, which has been removed from a fasting dog immediately after death, and at once extracted with the proper solvent has little or no fermentative activity. If, however, the pancreas be kept warm for a few hours, and especially if it be slightly acidified, the extract will be very powerful; and if the extract made immediately after death be acidified and kept warm for some time, it will also become active. So that it follows that the material extracted immediately from the gland cells is not the enzyme, but is a substance which on being warmed with a trace of acid, rapidly gives rise to the enzyme. This substance has been named "zymogen" or the "mother of ferment".

There appears to be for each enzyme a distinct zymogen, stored in the cells ready to be used, transformed into the active ferment directly it is required. The secretion of enzymes is a gradual process, at least one antecedent body being found.

If we now turn to a consideration of the human blood, we find that it presents a large number of cells, the leucocytes, suspended in a fluid medium, which like all the liquids of the body, with the exception of urine and gastric juice, is alkaline. These leucocytes are divided into four classes according to their size, to the relative proportion of the nucleus and protoplasm, to the shape of the nucleus, and to the chemical reaction of their contents. They are:

1. Lymphocytes, slightly smaller or larger than the red cells, with a narrow rim of strongly basophile, clear, or coarsely reticulated protoplasm and a compact or coarsely reticulated nucleus.

Protoplasmic granules are invariably absent, but in most of the larger cells the reticulum shows nodal thickenings which are difficult to distinguish from protoplasmic granules. The nuclear reticulum may also show similar nodal thickenings.

2. Large mononuclear leucocytes, varying greatly in size, some being only slightly larger than the lymphocytes, but many of them being the largest cells in the normal blood. Their protoplasm, which is greater in proportion to the nucleus than is the case with the lymphocytes, is *slightly basophile* and *very finely reticular*, with nodal thickenings often resembling granules. Their nuclei are coarsely reticulated with nodal thickenings and may be circular, horseshoe shaped, or elongated.

3. Polynuclear leucocytes, which are fairly constant in size midway between the lympho-

cytes and the largest mononuclear leucocytes. Their protoplasm is greater in proportion to the nucleus than is the case even with the mononuclear leucocytes; it is reticulated, and possesses *neutrophile protoplasmic granules* in considerable numbers. The nuclei are elongated and constricted, or composed of two or more lobes usually connected by threads of chromatin.

4. Eosinophile leucocytes, which vary in size from that of lymphocytes to that of polynuclear leucocytes. The relative proportion of protoplasm to nucleus is about the same as in the polynuclear leucocytes. The protoplasm which is not apparently reticulated contains *numerous large, strongly acidophile granules* which the writer has frequently seen in the act of passing from the cell into the surrounding medium. The nucleus is generally bilobed, the lobes being frequently separated and staining rather faintly with nuclear dyes, indicating a rather advanced stage of degeneration. Here then we have a classification of the leucocytes based upon their microchemical reactions and difference of form which carries with it among physiologists the conception of entirely different cells, while in the light of our present knowledge of enzyme secreting cells the so-called distinct leucocytes present a perfect illustration of the various stages observed in an enzyme secreting cell during the process of its activity. Brown and Morris in describing the changes in the scutellar epithelium of the barley grain state, "that the cell contents before the commencement of germination are very finely granular and the nucleus large and elliptical in shape. Within a few hours after germination begins, the very fine granules in the protoplasm become much larger and coarser and increase in number to such an extent, that the nucleus, which was at first very conspicuous, is so obscured as to become almost invisible. Towards the completion of the process the protoplasm again becomes clear and transparent, a few granules only remaining and the nucleus of the cell entirely disappears."

Is it not far more probable that the various classes of leucocytes are but so many stages of one and the same cell passing through this process of enzyme secretion, than that they are entirely distinct cells? It is interesting to note here that Virchow regarded the polynuclear leucocytes as developmental forms of mononuclear leucocytes, and that Schultze in 1865 describing leucocytes stated as his opinion, that all granules and leucocytes represented developmental forms of one series. Ewan states that the cell granules are a secretory product, and represent the center of the specific function of this cell, but that the

exact function has not been demonstrated. Ehrlich in 1891 regarded them as a sort of reserve material destined for use within the cell, but has not recently expressed himself on this point. Hankin, Kanthack, Hardy and Keng apply the term "alexines" to the secretory granules of the leucocytes, and believe that they are destined to be thrown out into the plasma or lymph and to exert a bactericidal or antitoxic influence. Botkin, by placing leucocytes in a one per cent. solution of peptone and in fresh plasma of various diseases, demonstrated that all leucocytes dissolve and disappear with varying rapidity. The lymphocytes proved the most resistant. The changes which occurred were the formation of coarse granules in the mononuclear cells; extension and loss of granules from the polynuclear cells; formation of vacuoles and clefts; swelling, fading, shrinkage, subdivision and final disappearance of the nucleus. Clinically the grade of leucocytosis has been found to vary often with the height of the temperature, more closely with the extent of the exudate, but measures more exactly the reaction of the system to the infectious agent, and so we have come to look upon these leucocytes almost entirely in the light of barriers against the entrance of infectious agents, carefully collecting all known facts to strengthen our position that leucocytosis represents nature's attempt to rid the blood and the system by means of leucocytes and their products of the bacterial and toxic causes of disease, entirely overlooking the fact that we have regularly a digestion leucocytosis which can in no way be related to bacterial and toxic infection.

Turning now to the evidence we have regarding the presence of enzymes in the blood, we find that the presence of a glycolytic ferment in normal blood has been known, and that Leptine found that it depended upon the red cells rather than upon the plasma, but this observation was undoubtedly due to the fact that enzymes in solution cling tenaciously to any substance in suspension in the solution, and indeed this fact is commonly made use of to separate them from their solutions. Gabritscheusky, by injecting sugar and peptone into the blood of animals, obtained results which seem to indicate that the leucocytes are capable of transforming both sugar and peptone into glycogen. Livierato concludes from clinical observations that the glycogen of the blood is increased in those febrile cases in which there is a leucocytosis with an active exudative lesion.

The study of diastase in the blood has been lately extended. Tiegal and Plass claim that the principal source of the diastase is the red

cells, while Bial places it in the serum, and Castellino and Pracca in the leucocytes, and found that its activity increased after the blood is shed. Hanriot has recently claimed to have demonstrated the presence of a fat splitting ferment in the blood. Schmidt, writing of thrombase, the clotting enzyme of the blood, states that at the moment of coagulation there occurs a disintegration of the leucocytes, and suggests that this decomposition gives rise to the enzymes. Halliburton successfully prepared the enzyme from the leucocytes of the lymphatic glands. Reynolds Green states that the leucocytes of the blood of vertebrates may be regarded in the same sense as independent bodies capable of carrying out their own process of nutrition.

Lepine and Barral in 1890 found that glycolysis could be detected in the blood after it had been shed. The process showed a minimum point of activity at 0 minutes C, an optimum at 40 degree-50 degree C, and a maximum at 5 seconds 4 degrees C. Arthur holds the source of this oxidase to be the leucocytes, and Lepine and Barral found that they could extract it from the corpuscles in greater quantity than from the serum.

On the other hand Ehrlich, using the aniline dyes which he divided into three main groups, claims to have established the essential distinction between leucocytes. He divided the aniline dyes into, (1) Basic dyes which unite with the acid principles of cells, (2) Acid dyes which unite with the basic principles of cells, and (3) Neutral dyes composed of certain mixed dyes possessing modified staining qualities, and uniting with certain cell structures not readily stained by other methods. The original views attributed to Ehrlich have suffered considerable modification since it became evident that the granules of many tissue cells, though of variable composition, may give identical reactions to dyes. At the present time the supporters of these views, while admitting the variations of the granule reactions, maintain that each class of granules is peculiar to one cell, and that transitional cells have not been demonstrated, stating that the separation of leucocytes according to the chemical character of the protoplasm is a much more exact classification than one on any other basis. This is merely begging the question, for it would seem advisable to first demonstrate the need, other than a purely clinical one, of such a separation of the leucocytes. In a study of the activity of the enzymes of the blood, the influence of the inorganic salts present in the liquor sanguinis must be taken into account. Sir William Roberts has demonstrated that the presence of sodium chloride or potassium

in the proportion of 1-4 of one per cent. greatly retards peptic digestion, and in the proportion of 1-2 of one per cent. almost brings the process to a standstill.

On the other hand the compounds of calcium must be present or otherwise no clotting will occur. Thus we see that the preponderance of evidence favors the view that the blood, and more especially the leucocytes, are the seat of profound enzymic activity which is intimately connected with the physiological phenomena of the body, and at present but dimly and vaguely comprehended.

The writer entirely agrees with Sir Lauder Brunton that "it is not in the intestines only that enzymes are found; they are poured into the blood, and as our acquaintance with the process of cell life increases it seems more and more likely that the tissue changes on which functional activity depends are affected by enzymes, and the truer does the speculation of Von Helment—that life is a process of fermentation—appear to be. There can be little doubt that if enzymes in a free state were to circulate through the body they would do much harm, and indeed we may regard this as well-nigh proved in regard to enzymes of tetanus—but an exhaustive study of enzymes and their products appears to be the most promising way of advancing our knowledge both of the nature and treatment of disease."

SOME SMALL THINGS IN SURGERY.

—INFECTIONS OF HAND, FELON, MACHINE INJURIES, SUTURES, GRANULATING WOUNDS, LEG ULCERS, CIRCUMCISION.*

By HORACE J. WHITACRE, M. D., CINCINNATI, OHIO.

In thinking over the question of a subject for presentation to your society, it seemed to me that it would be wise to bring up for discussion certain of the minor ailments and procedures which are encountered frequently in the daily life of the general practitioner, subjects which are rarely considered to justify a paper before a medical society, and subjects which are too often omitted from the course of instruction given in our medical colleges. These small things sometimes embarrass the practitioner greatly and always mean much in the estimation of the family which employs a physician for the first time. I shall take up a series of subjects without reference to their relationship and shall discuss them in a purely fragmentary manner without in any instance

* Read before the Campbell-Kenton Medical Society, September 15, 1904.

making an effort to present the subject in its entirety.

Infections of the Hand.—Inasmuch as infections are so frequently encountered in general practice, and since infections of the hand are by far the most frequent, I can best outline the principles for the treatment of infections in general by a specific reference to infections of the hands. Most of the points made in reference to the hand will be applicable to other regions of the body.

In the first place, let us consider superficial infections, with redness of the skin and some pain, which have their origin in the scratch of a pin, a splinter, or a nail. These infections are entirely superficial, quite harmless at the start, but may go on to the most extensive cellulitis, or so-called blood poisoning. If they are treated early and properly such results can invariably be prevented. The treatment that will most efficiently prevent serious consequences in this type of injury will be prompt cleanliness. To this end the entire hand should be scrubbed with soap and water, even though the infected area is very small, and this scrubbing should be done by the physician himself and not entrusted to the patient. Nothing short of a nail-brush and plenty of soap will suffice. After the soap and water have been rinsed off, the hand should be bathed in alcohol and then a wet dressing of acetate aluminium should be applied. This solution is made as follows: Alum 24.0 grams, acetate of lead 38.0 grams, water 1,000.0 C. C.; filter. The method of applying the wet dressing is very important. Pour an abundance of this solution in a soup plate or any other suitable dish, saturate a large amount of gauze (2-3 yards) in this solution, then apply it to the hand, dripping wet, in such manner that the entire hand and wrist, perhaps a portion of the forearm, are included. Then cover this wet dressing with a piece of gutta-percha tissue or oil silk, large enough to envelop it. Lastly, apply a bandage loosely in order to hold the dressings and tissue in place. The hand and arm should then be placed at rest. This extensive dressing should be applied even though the area of redness is very limited. The kind of antiseptic used in this wet dressing seems to me to be important. Bi-chloride of mercury is used by most physicians for a wet dressing. I believe, however, that it is almost regularly useless except insofar as it maintains an antiseptic condition of the surface. A drug to be efficient in a lymphangitis should be absorbed by the skin to a certain extent, and pass into the infected lymphatics. This certainly does

not occur with bichloride but does occur with aluminium acetate. Carbolic acid is perhaps more certainly absorbed by the lymphatics than any other drug that we possess; yet it is dangerous as a wet dressing, for the reason that gangrene of a finger is likely to occur after its continued application, and sometimes general poisoning, with smoky urine, will result. The solution of acetate of aluminium is harmless and certainly gives most astonishing results in these cases. Any superficial redness will regularly disappear within twenty-four hours under such application, and in more deep-seated infections, with a focus of pus, there will be such decided improvement in the surrounding redness in twenty-four hours that the focus will be definitely pointed out as the only remaining inflammatory area. Ointments are sometimes used in infections of this sort. It seems to me that they are absolutely contraindicated. Ointments may be of some value in certain skin diseases, but have a very limited use in surgical practice. I almost never have occasion to use an ointment of any kind.

Felons and Palmar Abscesses.—For the sake of scientific surgery do not poultice your felons and palmar abscesses; cut and cut early. The process is a necrotic inflammation caused by the presence of pathogenic germs deep in the tissues. Tissues are being destroyed with great rapidity by the suppurative process and anatomic conditions are favorable to its extension. It is entirely justifiable to apply a wet dressing (as described above) for twenty-four hours, if you think it possible to abort such an inflammation and are not certain of finding pus. I believe, however, that these cases are practically always ready to cut when you first see them. Even if a frank gush of pus does not follow your early incision, yet a microscopic examination of the black or highly venous blood will show an excessive number of leucocytes, indicative of imminent suppuration, and your early incision has in reality saved your patient from a destructive inflammation. Many physicians tell me that they cannot do this, that their patients will criticise them severely if they make an incision and fail to find pus. It seems to me that the day has come when the doctor should dominate the situation, that he should base his practice on scientific principles, and educate his people to correct understanding of conditions as they exist to-day, not as they existed when their mothers taught them in their youth. Incisions should be liberal: any incision less than 3-4 of an inch in the finger, or 1 to 2 inches in the palm, seems to me to be an error. Puncture incisions are just as formidable to the patient as free in-

cision, and they usually do no good: indeed, they are often an actual injury to the patient. When pus is present I usually make a free incision, swab the cavity with pure carbolic for three minutes, swab again with pure alcohol, then with water and pack loosely. By all means do not massage the area or press out pus. The less you handle an infected area the better: make your incision, swab gently, then let it alone. In both finger and palmar infections you have doubtless noticed that the dorsum of the hand usually shows great edema and redness, and at first glance would seem to be the center of infection. Please remember, however, that incisions are practically never necessary on the dorsum. I have time and time again seen cases treated by incision on the dorsum and the real focus in the palm or finger left untouched. These physicians wondered why their cases did not clear up after the incision. After incisions have been made and the packing placed, a very voluminous application of wet dressing of acetate of aluminum should be applied. Next, I wish to insist upon a procedure which I believe is usually neglected: viz., the thorough splinting of the hand, forearm and elbow. I believe that it is just as important to splint this sort of a case as it is to splint a fracture. Every movement of even a single muscle in this entire area will stimulate lymphatic circulation and spread infection.

Nothing has been said regarding the anaesthesia in these cases. Felons involving the last two phalanges of the finger can usually be painlessly opened under cocaine anaesthesia. This anaesthesia is accomplished by the injection first of one dram of Schleich's solution on each side of the base of the finger; second by injecting a two per cent. solution of cocaine along the line of incision beginning well back of the most inflamed area. Palmar abscesses always demand a general anaesthesia, since it may be necessary to make from one to four incisions four inches long and extending from the superficial palmar arch to middle phalanx of each finger.

Now as to subsequent treatment: Such a hand should be dressed in twelve hours; the packing should be removed and the hand soaked for two hours in a nine per cent. salt solution. Again, for surgery's sake, do not use antiseptic baths. The tissues have enough to do to recover from infection: do not impose the additional burden of recovering from the severe injury inflicted by bichloride of mercury. The hand will look very badly, there will be some pus—necrotic tissues will be seen everywhere—the swelling will remain, but rational non-interference is still the rule. There is a great temptation to take thumb for-

ceps and scissors and trim up these wounds. The greatest temptation of all seems to be to poke tubes into such a hand and squirt in peroxide of hydrogen. This will both injure the wound surfaces and disseminate the infection. It is justifiable to mop out the cavities very gently with a cotton-wrapped probe if this seems necessary. The salt solution bath should be repeated every six hours for periods of two days. In some cases I use a continuous salt solution bath. The wet dressing of acetate of aluminium is usually continued for two or three days in the interval between baths, then replaced by a dry dressing or a wet salt solution dressing.

Machine Injuries, Lacerated Wounds, Scalp Wounds.—Most wounds of this variety are infected when they come to the hands of the physician, that is, dirt has been ground into the wound surfaces at the time of the accident. The hands are usually greasy. Cleanliness is of prime importance in the treatment of these wounds and no pains should be spared in shaving and scrubbing the skin for a wide area around the injury. If a single finger is injured the entire hand should be scrubbed with nail brush and soap, then with alcohol. This is as necessary and should be as thorough as the preparation for an aseptic operation. No man would do a deliberate operation on a hand without cleaning the nails of the patient, and he should not dress a wound of this sort without similar care. Turpentine or some similar agent should be used to remove the grease. In the thorough scrubbing of the hands, the wound surface should be carefully handled and the nail brush should never be used on it. After the surrounding skin has been thoroughly scrubbed, then rinsed with sterilized water, perhaps mopped with alcohol or bi-chloride, the wound should receive attention. There is no objection whatever to allowing the soap and water or clear rinsing water to come in contact with the wound, but neither the alcohol, bi-chloride nor turpentine should be allowed to come in contact with it. It is much better to douche the wound with a stream of salt solution which has some force. Particles of dirt should be picked out with forceps. The method of closing a wound is important. Wounds of this sort should almost invariably be closed with abundant drainage. It is a mistake to try to obtain union throughout the entire length of the suture line. Provisional sutures can be inserted at points where gauze drainage emerges, then these sutures can be tied at the end of 48 hours when the gauze is removed, and as perfect union will be obtained as in primary suture. Infection of these wounds will almost invariably be

prevented by this practice of drainage. I believe that there is a very general tendency to suture scalp wounds and hands completely at the time of the first operation.

I always dress these wounds primarily with a wet dressing of acetate of aluminum, and if at any time in the course of the healing of such a wound infection shows itself, this wet dressing is re-established.

A word as regards sutures and ligature material. Cat-gut should be used almost without exception for ligatures and sutures. To my mind silk has absolutely no place in the bag of the general practitioner and should never be used by him. Absolutely sterile cat-gut possessing every degree of durability can be obtained in breakable tubes; it produces less irritation in the tissues than non-absorbable material and it is entirely absorbed when its function is completed. Silk-worm-gut and horse hair have a definite field of usefulness. Silk-worm-gut is the best agent that can be used for the subcuticular stitch. Horse hair is the suture material of choice for wounds of the face. Face wounds can usually be closed completely, either by subcuticular stitch of silk worm-gut, or by interrupted horse hair sutures. Horse hair is introduced by means of a very fine needle, is removed in 3 to 5 days, and leaves no scar. Face wounds need no external dressing except a little aristol powder.

The suturing of wounds is always painful and much dreaded by the patient. The process can be made entirely painless, however, by the injection of 2 per cent. cocaine along the deep edges of such wounds. The needle is introduced at the end of the wound, travels progressively along one border, 1-2 inch from the edge to the opposite end, then back to the point of starting, and the patient has felt only the first puncture of the hypodermic needle: suturing is now painless. Should a wound of this sort become infected, as would be evidenced by redness around the sutures or the appearance of pain, drainage should be established, a stitch should be removed here and there and a wet dressing of acetate of aluminium applied.

Granulating Wounds.—Granulating wounds are as a rule grossly mismanaged, because we too often attempt to manage them. It should be remembered that a granulating wound is a perfectly normal and entirely earnest effort on the part of nature to heal the defect; that nature is doing this by the development of granulation tissue, and lastly, that this granulation tissue is embryonal in type and for this reason the most delicate that can be found in the human body. Why should we inflict antiseptic solutions,

powders and salves upon such a tissue? These agents only hinder, never aid, the granulating process. The wound should be kept clean, to be sure, since the secretions collect and form a suitable soil for fermentation bacteria, which in turn will produce injurious toxins. The cleansing of such wounds is best accomplished by douching or immersion in salt solution. Salt solution is isotonic with the body fluids, is absolutely harmless to the delicate cells and accomplishes every purpose. It is irrational to talk about killing germs in the granulating wound. In the first place there are no pathogenic germs present, and in the second place any agent that kills germs kills cells. The most rational treatment of such a wound is to scrub the surrounding skin daily with soap and water, then douche the wound gently with salt solution, then leave the wound exposed to the air for the remainder of the day. At night a dry sterilized dressing should be applied. Ointments on a wound are positively harmful. When healthy granulations have been established in a wound the cavity should always be diminished by the bloodless suture. This consists in drawing the edges together or into apposition by means of narrow zinc oxide adhesive plaster strips, 1-2 inch apart. Proud flesh, or exuberant granulations, sometimes appears in a granulating wound and particularly when bi-chloride, peroxide of hydrogen, powders and salves, etc., are used.

This condition is best treated by trimming off the granulations even with the surfaces by means of a flat pair of scissors, then applying the nitrate of silver stick. Such granulations are insensitive and the procedure is usually painless. Pure balsam of Peru poured into the wound daily will maintain a healthy condition in the granulations.

Varicose Ulcers Of the Leg.—The discussion of granulating wounds suggests the subject of varicose ulcer of the leg, the bane of the general practitioner's existence. I shall not of course discuss this subject in its entirety but confine my remarks to a few suggestions in treatment. Every grade of induration, eczema, edema and extent will be encountered and many ulcers seem to resist all treatment that can be applied; yet the following general points will be found to yield positive improvement or actual cure in a high percentage of cases. First, insist upon elevation of the leg for the greater part of the day. Twice daily bathe the entire leg for one or two hours in 9 per cent. normal salt solution at a temperature of 100 degrees F. (a temperature of 120 will cause death to the poorly nourished skin). After removing the leg from bath douche it thoroughly with quite

cold water: dry it, then leave it exposed to the air, the ulcer being uncovered. Massage of the ankle, foot and of the calf muscles will be beneficial in the old cases. At night dust on borated talcum powder and apply a loose dressing. All eczema will promptly disappear under this treatment and the ulcer will heal within a few weeks. If the edges are indurated, the ulcer should be strapped with zinc oxide adhesive plaster. If this does not result in prompt resolution of the induration the edges should be incised down to the periosteum and excised or under cut. When the ulcer has healed continue the hot and cold douche to the leg twice daily; order a rubber bandage; massage leg and ankle at night and insist on a few hours rest in the middle of the day if possible. The prevailing custom of treating these ulcers by means of every known ointment seems to me to be wrong. I have rarely obtained results by this method. All patients suffering from varicose veins in the leg and leg ulcer do not by any means need operation, and the removal of varicose veins complicating an ulcer will not regularly benefit or cure the ulcer.

Carbuncle is a condition whose pathology and symptomatology are entirely familiar to you all. I merely wish in the connection to give the old flax-seed poultice another thrust. I presume that quite a large percentage of carbuncles are treated by some form of poultice and the variety ranges from castor oil and turpentine to cow dung.

I wish to present a specimen of carbuncle which will demonstrate to you the impossibility of influencing the most active area of supuration in a carbuncle by a poultice. The carbuncle begins superficially in the hair follicles and then extends so deeply and so broadly underneath practically normal tissues that it seems to me out of the question to influence these processes by any superficial application. Many men make an incision in a carbuncle after having poulticed it for a few days. I think that this specimen will likewise show the futility of such an incision. You can readily see that an incision would only open a very few of these irregular, very extensive and almost independent pus collections. I know of no more accurate simile than that of poking a rat out of a rail pile; you must either tear the rail pile to pieces or burn it to get the rat; the same is true of a carbuncle. The only way to reach the infection is to excise the entire indurated area. Patients who are poulticed and incised are sick from two to twelve weeks and many of the patients die. A patient whose carbuncle has been excised is well in 24 hours, except for his granulating wound, which never gives

him inconvenience, or makes him sick. You can readily see the size of the carbuncle excised in this case. This man was septic and his carbuncle had attained a diameter of three inches even though he had been sick but four days. His carbuncle was excised leaving a tremendous hole in the back of his neck, yet his temperature was normal in 24 hours; he sat up in 48 hours, he was absolutely without other symptoms of wound infection and had a clear granulating wound from the day of his operation. The technique of the procedure is simple. A carbuncle one inch in diameter can be painlessly excised under cocaine; larger ones require other anesthesia. The entire indurated area is circumscribed by an incision which extends down to the muscle and this indurated button is removed. Bleeding is free but easily controlled; a wet dressing is applied for 48 hours, then zinc oxide adhesive plaster strips are used to pull the edges of the wound together.

Fractures—I have so recently published a "paper" in the Lancet Clinic on the treatment of fractures at the wrist, elbow and ankle, that I will not discuss this subject but simply refer you to this paper.

Circumcision.—The question of circumcision seems so minor that it seldom comes up for discussion in a medical society. I have seen so many imperfect results, however, that I venture to present my method to you. In the first place I wish to state that quite a high percentage of cases does not need circumcision at all. A contracted fore skin in a baby is not a sufficient indication for the operation. Blunt, narrow artery forceps of the Kelly type can be introduced into the opening and the orifice sufficiently stretched to allow the fore skin to retract freely over the glans, and no further difficulty will occur. Certain cases do demand operation, however. The first point in the procedure is to mark off the line of incision with the parts completely at rest. Three puncture incisions should be made, one on the dorsum and one on each side about mid-way between the underlying corona and meatus urinaris. The ellipse connecting these three points and the fraenum will indicate the line of incision. Too much skin is removed in a majority of instances. Next apply three artery clamps, one on each side of the dorsal median line, one to the fraenum. An assistant holds one dorsal clamp, the operator holds the other in his left hand, inserts the blade of a blunt pair of scissors underneath the foreskin and then cuts in the median dorsal line as far back as the dorsal puncture incision. When this point is reached a No. 00 cat-gut suture is applied to join the mucosa to the skin. Adhesions between the foreskin and

the glans are now completely separated. If two of the clamps on one side and the suture are held taut a triangle of skin is presented. This triangle is clipped away along the elliptical line by the puncture; then the opposite side is held taut and clipped away. One No. OO cat-gut suture in the fraenum and two on each side will complete the operation. I rarely use a tourniquet for hemorrhage, preferring to catch the vessels as they bleed.

It is needless to say that a "paper" of this sort on small things in surgery could be greatly extended. I shall very abruptly close my discussion at this present point, however, with a word of apology to those upon whom I have imposed minor details which may seem to them insignificant and matters of common and universal information.

POTT'S FRACTURE.*

By A. P. DOWDEN, EMINENCE, KY.

To understand more clearly the pathology of Pott's fracture it might be well to first review the anatomy of the ankle joint, which, as you all know, is a ginglymoid or hinge joint formed by the lower extremity of the tibia and its malleolus and the external malleolus of the fibula. These bones are united above to receive the upper curved surface of the astragalus and its two lateral facets. The bony surfaces are covered with cartilage and connected together by a capsule which in places forms thickened bands constituting four ligaments, viz. anterior, posterior and two lateral.

The most common and important fracture in this region is known as Pott's fracture and is caused by forcible eversion and abduction of the foot, occasionally by inversion and adduction. In typical cases there are three separate lines of fracture: one of the fibula about three inches above the tip of the malleolus, one of the internal malleolus, and one at the outer lower end of the tibia. Occasionally instead of the last two fractures there is rupture of the internal lateral ligaments of the ankle and of the ligaments of the lower tibio-fibular articulation.

The essential feature of the injury is the separation of the external malleolus from the tibia and its displacement outward in company with the foot.

Symptoms—Characteristic deformity, con-

sisting in outward displacement of the foot and prominence of the internal malleolus: three points of localized pain on pressure, corresponding with the three lines of fracture, or the equivalent injuries; and the possibility of moving the foot from side to side within the widened tibio-fibular mortise.

Occasionally the broken internal malleolus is forced through the skin and the joint thus opened; or if the displacement remains unreduced, the skin overlying the malleolus may slough in consequence of pressure. The foot has a tendency to slip backward, sometimes so far that the body of the astragalus lies entirely behind the tibia, forming a displacement frequently overlooked.

Treatment.—Reduce the displacement completely and prevent its recurrence. To get perfect and satisfactory reduction the patient must first be completely anesthetized; then grasp the leg firmly with one hand, the foot with the other, lift the foot forward, press it forcibly inward until the external malleolus is felt resting against the tibia. Recurrence is prevented by a fixed dressing of plaster of Paris splints, one being applied posteriorly from just below the knee along the calf, heel and sole to and beyond the toes, one on dorsum of foot crossing outer border of the sole and being carried up the inner border of the leg. These splints are held in place by circular turns of bandages above the ankle and outer ends of splints. While the splints are hardening the foot must be held in place by one who appreciates the importance of holding it in the correct position. The advantage of this dressing over complete encasement by plaster of Paris is that it admits of inspection. As soon as the primary swelling has abated, if the case is uncomplicated, the patient may be allowed to go about on crutches.

Prognosis.—I have purposely left the prognosis for the last. At no time in his professional career is the surgeon's reputation more at stake than when called upon to treat a fracture. No physician should ever attempt to treat a fracture of any consequence without counsel, not so much for the patient's benefit as for his own protection in the future, and I believe our prognosis to the patient should always be guarded and possibly unfavorable. So many things can happen during the surgeon's absence which at the time may appear insignificant to the patient, but may later cause sleepless nights to the surgeon in charge. The circulation should be carefully watched, the limb should be kept warm. Undue pressure from the dressing may cause sloughing.

Generally in uncomplicated Pott's fracture the results are satisfactory.

* Read at meeting of Henry County Medical Society, April 25, 1904.

ECTOPIC GESTATION — DIAGNOSIS
AND CASES.*

By MAGNUS A. TATE, CINCINNATI, OHIO.

The diagnosis of an ectopic gestation is in one case easy, in another difficult, and in a few impossible to make. My experience and personal observation lead me to say that ectopic pregnancy is diagnosed as often after as before section. Many a case of pus tube, or other pathological condition, has been diagnosed as an ectopic gestation, and vice versa, not by beginners but by experienced gynecologists.

There are many symptoms that help, in fact almost make the diagnosis for us, and again the case is a puzzle not solved until ocular demonstration reveals the true state of affairs.

In a given case a patient comes to consult you as to the existence or non-existence of pregnancy. After a thorough examination you may be able to tell her that she is pregnant, but unfortunately the child is outside of the uterus and not in its normal position. In such a case we expect to find a history and symptoms somewhat as follows: The woman who is afflicted with an ectopic pregnancy will generally give the history of some pelvic inflammation, or she has probably had a number of abortions, has been married a long time and sterile, or had a child and then an interval of a number of years intervened before she became pregnant again. Nearly always we get a history of an irregular menstrual period, due in some cases to pelvic inflammation, which in turn may be caused by gonorrhoea.

Patient may tell you (if she be a multipara), that she has peculiar feelings and sensations not present in her other pregnancies, and that she suspects something wrong.

There has been a cessation of the menstrual period once or twice, and shreds, membranes or clots may be passed at irregular intervals. The breasts may or may not be just a little tender, with a slight darkening of the areola.

Morning sickness and nausea are sometimes present.

A vaginal examination may reveal a discoloration of the vaginal walls which is of some value, if patient be a primipara, otherwise not. The cervix is slightly enlarged, a little softened, and the uterus is softer and enlarged, but not as it should be with a six to ten weeks normal gestation.

To the left or right of uterus a mass can be felt and often mapped out. To your finger it feels globular in shape, soft, and sometimes we receive the sensation as if it pulsates, so

some writers describe it as a pulsating mass. This pulsation however is not so diagnostic a feature as we are led to believe.

In another case where the woman did not seek an explanation or diagnosis as to her existing condition, the tube becoming overdistended, a rupture of its walls follows. In such a case a diagnosis can very readily be made, provided a satisfactory history is obtainable.

This patient has had the ordinary symptoms as enumerated, when without any warning, a sudden violent pain takes place, located to one or other side; she usually faints, may drop to the floor as if struck by a heavy blow, and often passes into a state of collapse. The shock may be profound, her pulse intermittent, faint and irregular, can not be felt at the wrist, and she is now bleeding internally.

A vaginal examination at this moment is not so important from a diagnostic stand-point as a clear history; in fact the presence of pain and muscular contractions are sufficient to make the examination negative. In trying to make this examination the greatest care must be exercised, for fear of exciting more hemorrhages.

There are cases reported where these usual symptoms are not present, and patient suffers from repeated colicky pains for some time before rupture takes place, and then only a temporary and in no way a profound shock follows.

If, however, the patient survives the usual shock, later on when the watery elements of the blood have been absorbed and a clot has formed, some resistance will be offered to the examining finger. Should the patient be free from all inflammatory pelvic disease or growth, we may safely say that the mass palpated is clotted blood. Unfortunately, in such a case the hemorrhage may be so profuse that the patient never rallies, unless surgery be resorted to immediately. If by chance nature should stop the hemorrhage, the amount of blood extravasated will depend upon the patient's general pelvic condition and upon shock.

Sometimes the whole pelvis is full of clotted blood, the uterus is pushed forward and the intestines lifted entirely out of the pelvic cavity, so that the abdomen is enlarged.

The blood escaping when the abdomen is opened may carry the small foetus with it, and this accounts for our not being able to find it in some cases.

To be absolutely certain that the uterus and mass at its side are separate, the cervix may be gently drawn down by a tenaculum forceps and a thorough examination then made of the mass per rectum.

As a rule the clotted blood gravitates to

* Read before the Campbell-Kenton County Medical Society, September 15, 1904.

Douglas-cul-de-sac. This blood extravasated may be followed by a peritonitis. The discharge from uterus examined microscopically clears up doubtful cases, for placental tissue, decidual cells and chorionic villi can be found. This discharge may be of such a nature as to be misleading, if the history is not carefully taken and the examination has been superficial; in fact, a diagnosis of abortion has frequently been made, and the error not discovered until later, when a mass was felt to the side of uterus.

If the patient is so imprudent as not to seek medical advice until after rupture (the symptoms, etc., of which may not have been severe) has occurred, this delicate sac which has formed around the embryo in the abdominal cavity may give way, and the result is generally a terrific hemorrhage followed by collapse and death.

The tube may enlarge greatly and not rupture. This, however, is not the usual case. If no rupture occurs the foetus dies, absorption of amniotic fluid follows, causing a rapid diminution of size of sac, which is spoken of as almost pathognomonic.

Should the patient go on to full term, the sac formed, having been enforced, becomes strong, and a diagnosis of abdominal pregnancy is now determined by palpation, as we are able to easily feel the child in its abnormal position, and upon auscultation to hear the foetal heart sounds.

A vaginal examination reveals a uterus which is small and the growth has pushed it out of its usual position.

Here and there cases are reported where labor pains have set in and the child, having died in the abdomen, becomes changed into a hard chalky mass called a lithopaedion, in which condition it may remain for years. Instead of forming a lithopaedion the whole ovum may become infected, break down into pus and necrotic debris. If so, the patient dies of sepsis, or artificial openings are made by nature, and portions of the foetus are discharged through neighboring structures as the bladder, rectum or abdominal wall.

If the history of the case be plain and portions of foetus are being discharged, the diagnosis has long been made before medical aid is sought.

If the case be so fortunate as to rupture and bleed into and below the layers of the broad ligament, we have the extra-peritoneal in contra-distinction to the intra-peritoneal variety, as described above.

In the extra-peritoneal form the symptoms are not so severe, the pain is usually paroxysmal and a vaginal examination is of great importance. The broad ligament is distended,

becomes tent like, the top being at the torn tube, the base at the bottom of the pelvis, and the uterus is pushed over to one side. This tumor may be a very tense mass, depending upon the amount of hemorrhage between the broad ligaments.

CASE I.—Mrs. R., 31., Ripley, Ohio; referred to me by Dr. Dunlap. Came to Cincinnati to be operated upon for a supposed pelvic abscess, with the following history:

Three years ago gave birth to a child and since that time has not been healthy. Eighteen months ago had a miscarriage at the third month, and has been bed-ridden most of the time since, and for the last three months has had pain throughout the entire pelvic region, especially marked upon defecation and urination.

Patient could hardly walk when brought to the office. Upon questioning, I found that every evening she had fever, chills and a rapid pulse.

Upon vaginal examination, the posterior vaginal wall was bulging forward and out like a large foetal head, semi-fluctuant and filled up the whole of the vaginal canal.

Upon rectal examination (which was very painful), as high up as the finger could reach, this semi-fluctuant mass was felt.

Patient was removed to St. Mary's Hospital for operation, and I fully concurred with the diagnosis as given by her family physician that she was suffering from a pelvic abscess.

Operation.—A transverse incision was made into Douglas-cul-de-sac and instead of getting purulent fluid as expected, thick clotted blood welled out of the opening bringing with it many shreds of placenta. Uneventful recovery followed, and in six weeks the patient left for home.

CASE II.—Mrs. M., age 38; mother of six children, the last born ten years ago. She entered St. Mary's hospital complaining of constant pain in the lower right side for six months, also she had noticed a swelling in the right ovarian region, which was gradually getting larger. Two months before entering hospital, she fell and struck her right side; since then pain has been constant, and the swelling has slowly increased in size.

Upon admission temperature 99, pulse 90.

Upon examination of the abdomen a swelling was seen in the appendical region, and upon bi-manual examination a distinct tumor the size of a cocoa-nut was felt to the right of uterus.

A positive diagnosis as to the nature of this mass was not made.

Operation.—Upon opening the abdominal cavity the whole field was immediately filled with thick clotted blood. At least a

quart and a half was taken from the abdomen. A ruptured right tube was found and ligated. Cavity closed without drainage and patient made an uninterrupted recovery, leaving the hospital in four weeks.

CASE III.—I was called by Drs. White and Bledsoe, of Covington, Ky., to see a Mrs. B., and obtained the following history:

Age 25, married two years, always healthy and strong until present illness. Never had any diseases except those common to childhood. In February, 1902, occurred the last menstrual period. From that time until March 7, 1903, suffered continual pain in abdomen. In December, 1902, or January, 1903, had an increase in pains somewhat analogous to labor pains which lasted for three days. Had never had any vaginal discharges until February, 1903, when she passed one large clot of blood from the vagina, and has had no discharge since then. Inspection showed an abdominal enlargement, regular in outline, as though the abdomen contained a full term uterus, and presence of a well marked linea nigra.

There was no contraction or relaxation of tumor; it was very large, extending up to the ensiform cartilage, but no child could be outlined. In the left iliac region a very hard lump, the size of an orange, could be felt.

Auscultation negative; no foetal heart or bruit could be heard.

The vaginal examination could not be satisfactorily made, on account of the great pain caused by the insertion of the finger into the vagina.

Under anaesthesia auscultation was still negative.

Examination revealed a small vagina, and a bulging mass in the right fornix. The cervix was not in its normal position, but up in the left fornix, and we were only able to feel it with much difficulty. The os was somewhat patulous and soft; there was no discharge from it.

The breasts were enlarged and areola (primary and secondary) well marked, and both breasts contained milk.

Patient stated that during the past three months the breasts had gradually diminished in size. We were able to make a positive diagnosis of the existence of pregnancy, but were unable to state whether the child was in the uterus proper or not, how long it had been dead, and whether a fibroid further complicated the case.

Patient was sent to Spears hospital and on March 7, 1903, assisted by Drs. Wenning, Schultz and Parter I made an incision in the median line seven inches in length. Upon opening the abdomen an enormous round

mass came into view and adhesions were found over its entire posterior surface. Blood vessels were enlarged and plentiful. The hard mass which was felt in the left iliac region was the uterus which had been pushed over, and the large round mass filling the abdominal cavity was that of an ectopic gestation in the right tube and broad ligament. We decided that it was best to open the sac, remove the child and then take out the sac.

The tumor was partly lifted out of the abdominal cavity after separating some of the adhesions to peritoneum and intestines, and the upper part of the abdominal wound was closed by four through and through silk-worm-gut sutures, to keep the intestines from bulging out. Large gauze pads were used to pack around the gestation sac where possible, and so protect the abdominal cavity.

Upon opening the ectopic sac there was almost no bleeding, but as soon as it was opened a half pint of dark colored fluid covered the field. The child was extracted feet first. The remaining cavity was immediately packed with gauze and the opening closed with hooked clamps. In removing the sac-mass considerable difficulty was encountered as the adhesions to its posterior wall were very numerous. A photograph of the child, placenta and sac-mass I show you.



Although removal of the uterus, left tube and ovary would add to the shock of the operation, complete hysterectomy was performed, in order to do away with the danger of septic material being left in the raw stump. The abdominal cavity was mopped with hot salt solution pads, and then all gauze pads were removed and the abdominal cavity thoroughly flushed out.

We were unable at this time to close the abdominal wound on account of numerous tears in the peritoneum extending along the sides of the vertebral column. These were all closed by running cat-gut sutures. After all bleeding was checked, the abdominal cavity

was again flushed out with hot salt solution, vaginal drainage employed, abdominal wound closed with through and through silk-worm-gut sutures. Time of operation 1 hour, 35 minutes.

Patient rallied; temperature at 8 p. m. the same day 100 and pulse 90.

The following morning temperature normal, pulse 90. No abdominal distention was present. Patient's condition seemed very favorable. That afternoon at two o'clock the pulse went up to 120 and became very irregular. Norwood's tincture of veratrum viride, 10 drops, was given hypodermatically; this was repeated three times at intervals of 40 minutes with no effect, and the pulse became more and more irregular and rapid. At 5:30 p. m. there occurred a large movement of the bowels and soon after the patient became pulseless. The respiration remained good, skin was not covered with clammy perspiration, and the extremities were easily kept warm by hot-water bottles. Artificial stimulation was resorted to by means of whiskey, digitalis, and strychnine hypodermatically, injections of salt solution and carbonate of ammonia per rectum. Patient remained in this condition for 24 hours, never losing consciousness, never having rapid breathing, but only occasionally could radial pulse be felt. At the end of 24 hours, that is about 5 p. m., the pulse was strong though irregular.

She remained in that condition until a little after midnight, when suddenly she again became pulseless. Stimulation was ineffectual, and she died a little before one o'clock, March 10, 1903.

From the above history, time of probable pains in December, 1902, or January, 1903, and appearance of child I judge that it had been dead for three or four months.

Measurements of the child were: length 50 cm.; circumference of hips 28 cm.; occipito-mental circumference 35 cm.; occipito-frontal circumference 30 cm.; occipito-mental diameter 11 cm.; bi-parietal 10 cm.; weight 6 lbs. 1 oz.

The sac wall, which was nothing more than a decomposed rotten mass, measured from one to three inches in thickness and weighed 3 1-2 pounds.

I have selected these three cases from my list of ectopic pregnancies because they presented symptoms which were somewhat out of the ordinary, showing the difficulties encountered in trying to make a diagnosis.

Experience is constantly teaching that if we hope to diagnose cases of ectopic gestation with any degree of certainty, the irregular as well as the regular cases must be carefully considered and studied.

THE RADICAL CURE OF INGUINAL HERNIA.*

By AUGUST SCHACHNER, M. D., LOUISVILLE, KY.
Surgeon to Louisville City Hospital.

In the light of our present knowledge of hernial surgery should the medical profession advise operating or trussing? This question is pressing itself more and more upon the profession and only when we consider the percentage of hernias occurring upon the one hand, and the tremendous strides that have been made in the operative cure upon the other hand, can we realize the necessity of dealing with this question without further delay.

Prior to the introduction of the Bassini operation there was no procedure known to surgery worthy of the expression of radical cure. Therefore, up to that time it was quite proper that the best advice should be trussing as the first and best resort.

The Bassini operation has been before the profession for about two decades, certainly long enough to have passed its probationary period. Its merits can be judged best by a study of the results. Coley (*Annals of Surgery*, Vol. XXXVIII, Page 806) reported 937 cases with eleven relapses, or a little over one per cent, and a mortality in 1075 cases of two deaths, or less than one-fifth of one per cent. At Carles Clinic in Rome there were two deaths in 1400 operations on 1285 patients.

Although it is true that these are the best statistics by the best operators, and it would be unfair to overlook personal equation, it must however, be admitted that the Bassini operation does not represent a specially difficult operation, and there are no reasons why the results of competent and careful operators with even a moderate experience should not be almost as good as the above.

Contrast this with trussing. How many individuals are wearing a truss which does not truss? How many individuals are capable of judging if a truss is really performing its functions? The answers to these questions are found in the number of strangulated hernias, and the number of cases that come to both practitioner and surgeon with large and troublesome hernias which at one time were small and did not give any trouble, but became large through imperfect or insufficient trussing. Add to this insufficiency, which attends a very large percent of trussing, an element of discomfort and the exclusion from certain occupations and exercises, and last but not least, an operation of necessity in many cases

* A paper read before the "Ohio Valley Medical Association" at Evansville, Indiana, November 9, 1904.

at the end of it all, and at a time when conditions are not favorable for the best results, and then the question of trussing decides itself.

After all it resolves itself into a question of education; as soon as the public and the profession realize the meaning of truss as it is usually practiced on the one hand, and the significance of the radical cure on the other hand, we will see in hernial surgery a repetition of what has occurred in the surgery of the appendix.

The truss which, before the time of the Bassini operation, was quite properly given the first place, is, since the Bassini operation, given the second place. Instead of an operation becoming the last resort, it is now the first resort. Trussing will be restricted to the very young in whom, if carefully employed, there is a chance of cure; to the very old, or those so afflicted as to place them beyond the pale of surgery; and lastly to those who have been operated upon and have had recurrence, since experience has demonstrated two facts, first, that a recurrence is more difficult of operation than a fresh case, and second, a case that has been operated upon is more amenable to a truss than one that has not been operated.

Certainly, nowhere in surgery can we find to-day two such propositions, one of which offers as much and the other as little, and in which the one that offers the least finds an almost general acceptance, and that which offers the most an exceptional acceptance as we do in connection with hernia, and all of which is bound to reverse itself with a better understanding of the conditions.

Anatomy.—Recent investigations by Turck of Chicago have suggested that the attachment of the internal oblique to Poupart's ligament is not the same in both sexes.

In the female it arises from the outer fourths whereas in the male it occupies the outer two-thirds of the Poupart's ligament. This, together with the size of the cord as compared with the ligament, explains the difference in the size of the internal ring as well as that of the cleft, and represents the principal anatomical reason for the greater frequency of inguinal hernia in the male over the female. It is reasonable to suppose that the internal oblique would, in the absence of either cord or ligament, take its origin from the entire Poupart's ligament, since the so-called inguinal canal is nothing more than an elevation of the lower fibres of principally the internal oblique to facilitate the passage of the cord or ligament, as the case may be. In the absence of the cord or ligament there would be no canal, so-called, and what is now a weak point in the muscular arrangement of the

trunk would become a relatively strong point.

The anatomical nomenclature of inguinal hernia would be improved by referring to the inguinal canal as a cleft, since it is more a separation of the lowermost fibres of the internal oblique and transversalis upwards from Poupart's ligament than it is a true canal.

In the operative cure we bring these fibres down to where they would have been if they were not displaced to make a way for the chord or ligament, rather than the obliteration of any true canal.

The steps in the typical Bassini operation are:

First, an incision parallel with Poupart's ligament and about one inch above. This incision extends from the external to the internal ring and in depth to the aponeurosis of the external oblique muscle.

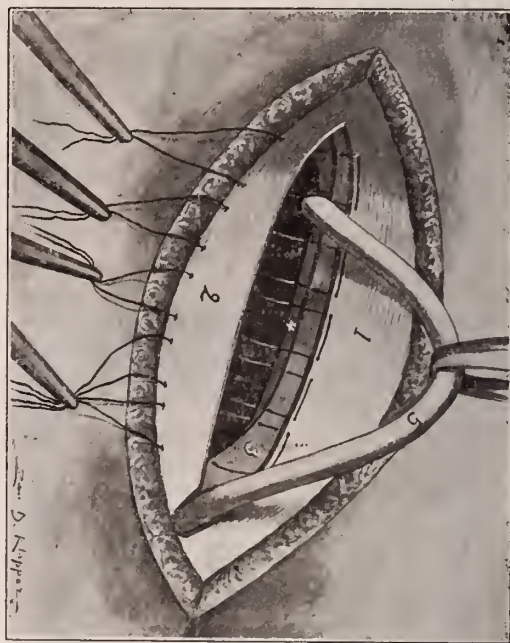


Fig. 1. Andrews' Operation. This illustration shows how sutures have been inserted through the internal portion of the external oblique aponeurosis (1) and the edges of the internal oblique (3) and transversalis (4) muscles and carried through the shelving edge of Poupart's ligament and close to the insertion of the external portion of the external oblique aponeurosis (2). One suture is placed above the spermatic cord (5), which is held to one side and 2 to 4 below it.—From Elsendorath, American Medical Association, September 10, 1904.

Second, an incision dividing the external oblique and laying bare the inguinal cleft, which in hernial subjects contains the cord and the hernial sac.

Third, separation and ligation of the hernial sac.

Fourth, obliteration of the inguinal cleft by suturing the conjoined tendon to the posterior surface of Poupart's ligament.

Fifth, dropping the cord upon this line of

suture and re-uniting the aponeurosis of the external oblique.

Sixth, uniting skin and fascia.

Since the introduction of the Bassini operation many modifications dealing with one or another detail of the operation have been advanced, but in none of these operations has the basic principle advanced by Bassini undergone any material change. These modifications are almost too numerous to mention and therefore the principal ones only are taken up in an anatomical order from within outward.

Sac.—The usual ligation of the sac has been modified by Halstead by over-correcting and suturing the peritoneum, as in an ordinary laparotomy. This, by the same surgeon, has again undergone modification, in that the

face could this peritoneal dimple or depression be effaced. Many believe that however much the so-called over-correction as originally advocated by Halstead is practiced, there still remains a slight depression. The objections that have been urged against what seems the excellent idea of McEwen, if not an excellent method, are that the anchoring of the folded sac in the exact location is not an easy matter, and secondly, the enfolded sac has frequently insufficient nourishment and consequently sloughs. Kocher modifies the treatment of the sac by drawing it out through a small opening in the external oblique aponeurosis upon itself and burying it along a line corresponding to the inguinal cleft. The external oblique upon each side of the twisted sac is sutured over the sac, and in this manner the twisted sac is used to depress and obliterate the inguinal cleft. This, however, like McEwen's idea, has not been received favorably by surgeons in general.

Still another method of dealing with the hernial sac is the application of a purse-string suture, introduced either on the outside or the inside of the neck of the sac. The use of the suture instead of the ligature has the advantage of preventing slipping and of overcoming the tendency to slough of the portion of the sac beyond the ligature, and of being a more accurate method of closure.

The internal application is preferable, inasmuch as it allows the closure to occur more directly under ocular inspection.

Internal Ring.—Since the cord starts outward at the internal ring this point is necessarily not only the beginning of the hernia but likewise the invariable place at which recurrence first manifests itself. For this reason the internal ring has always received the greatest attention at the hands of both investigators and operators. The brunt of the force from within is always spent at this point, and unless this point gives away first the cleft will always be found intact. Some surgeons recommend, in addition to the suturing of the conjoined tendon, the suture also of the transversalis fascia. This, however, has not been generally considered as either necessary or feasible in the average cases. Halstead has attempted to fortify this vulnerable point by the re-section of all the veins of the cord excepting three or four, and in this way, by reducing the size of the cord, correspondingly reducing the opening and strengthening the wall. The objection to this modification is that the ring suffers but slight reduction in size, and the integrity of the testicle is endangered beyond the good which might be derived. Therefore, since atrophy of the testicle has occurred in a number of instances,

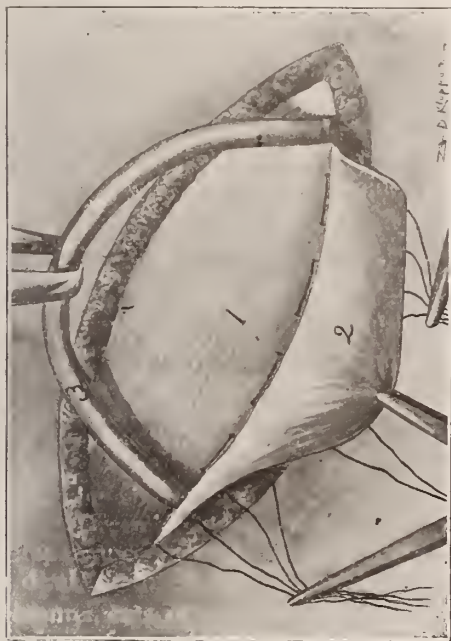


Fig. 2 Andrews' Operation. The structures which have been included in the sutures above and below the cord (3) are drawn over to Poupart's ligament just before tying the sutures and replacing the cord between its new coverings, which are the internal (1) and external (2) portions of the oblique aponeurosis.—From Eisendrath, *Journal American Medical Association*, September, 1904.

sac is ligated and then drawn outward and fastened on the under surface of the internal oblique muscle. McEwen folded the sac upon itself and used it as a buttress to entirely overcome the depression or dimple, as the case may be, which results from the ligation of the sac. This occupies a point corresponding to the internal ring and plays an important part in the causation of the original hernia, or in its recurrence.

It was believed by many that only by pressure made upon the external peritoneal sur-

this step has virtually become a dead letter.

Coley has called attention to the importance of placing one or two sutures *above* the cord, so as to protect the opening in an upward direction. The suturing of the conjoined tendon is decidedly most important at this point and if properly performed recurrence will be impossible, even though the balance of the cleft does not receive the same perfect closure. All slack should be taken up and all sutures should be given a liberal purchase in order that a snug and secure closure may be effected. It has also been recommended to bring the cord directly out through all the muscular layers, including the external oblique. This, however, is a step backward, for the maintenance of the obliquity of the cleft is a strong element in not only the strength of the region but also in the preven-

will hardly ever be accepted as uniform procedures.

The Cord like the ring has been subjected to different forms of treatment. Halstead practiced its reduction in size as already pointed out. Bull and others have in certain cases practiced placing it behind the muscles instead of in front of or superficial to them. This is important in certain recurrences as well as in certain cases of undescended testicle. Fowler places the cord behind the peritoneal cavity, which is likewise a splendid idea in certain cases complicated with undescended testis, but as a regular procedure is open to the objection that it necessitates division of the posterior wall.

The Inguinal Cleft has been closed in different ways, either with interrupted or mattress sutures, and with different varieties of suture material. Some have objected to the mattress suture on the ground of causing possibly a division of the muscular fibers. This criticism will hardly hold, if the sutures are carefully and properly introduced.

Experience has abundantly proven that the best suture material is the kangaroo tendon in strands of moderate size.

By far the most important modification which has been suggested in the closure of the cleft, is the method of imbrication or overlapping as suggested by Dr. Andrews. This principle has not only been of importance in the cure of inguinal hernia but of equal value in the cure of umbilical hernia as pointed out by Mayo.

In the Andrews operation, we have not only the apposition of broad surfaces but overlapping surfaces. In addition to this, we have all three of the abdominal muscles behind the cord instead of the two inner ones behind and the external muscle in front. This is undoubtedly the most valuable addition that has yet been added to hernial surgery since the Bassini operation.

The modifications which have been most satisfactory in the writer's experience are the purse-string suture in lieu of the ligature in dealing with the sac, and the Andrew's method of closing the inguinal cleft by imbrication. The Bassini operation thus modified has not been attended by any relapses in the writer's experience and has supplied what we think the best operation for the radical cure of hernia.

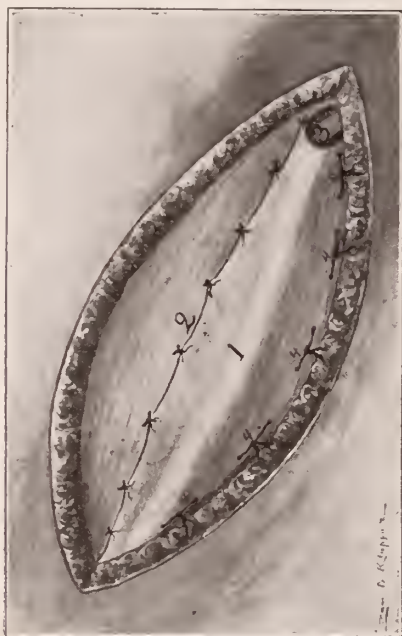


Fig. 3. Andrews' Operation. The kangaroo tendon sutures have been tied. The knots (4) lie on the outer side of the external portion (1) of the external oblique aponeurosis. The contour of the cord (3) is seen lying in its new canal formed by bringing the edge of the external portion of the external oblique aponeurosis (1) over and suturing it by interrupted catgut sutures to the outer aspect of the internal portion (2) of the same aponeurosis.—From Eisen-drath, Journal American Medical Association, September, 1904.

tion of the recurrence of the hernia. The region corresponding to the internal ring is of such importance, and its satisfactory closure so difficult, that many surgeons, Fowler, Dawbarn and others, have endeavored to obliterate the ring entirely and bring the cord out at the external ring without traversing any special cleft created by the operation. The suggestions of both Dawbarn and Fowler have their advantages in special cases, but

THE DIAGNOSIS OF A FEW ORTHOPEDIC CONDITIONS WHERE AN EARLY DIAGNOSIS IS NECESSARY FOR SUCCESSFUL TREATMENT.*

By B. F. VAN METER, M. D., LEXINGTON, KY.

Gentlemen of the Society:

I will take you back to your student days when I say belly ache is a frequent and early symptom of Pott's disease, and pain in the knee an early symptom of tubercular hip. You have not forgotten that, but some of us do not always remember at the right time the things we had pounded into us while students. If we did we would always remember to examine our patients. Is it not a fact that more errors are made in diagnosis from lack of examination of the patient, than from lack of knowledge on the part of the Doctor?

The incentive for this paper has been several cases sent to me recently for diagnosis and treatment who have lost their golden opportunity by delay in a correct diagnosis. So in this paper I want to run over the diagnostic points in a few orthopedic conditions where an early diagnosis is necessary to successful treatment, or a great aid, and report a case or two under each head.

Anterior poliomyelitis is an acute inflammatory process of the area of the grey matter of the anterior cornua of the cord, involving both the neuroglia and the cells. There are two forms, the acute febrile comprising about $\frac{3}{4}$ of the cases. In the other type, in which there are no constitutional evidences of disease, the symptoms are caused by hemorrhage or thrombosis. This class of cases is rare; it is the kind where the child goes to bed as well as usual, and gets up the next morning with a paralysis of some certain group of muscles, most often the anterior tibial group, or the quadriceps extensor. It occurs most frequently in the warm months, and no adequate cause for the disease can be assigned except by the mother; she always lays it on the nurse, unless she happens to be the nurse. The disease is usually divided into four stages.

1. The stage of onset, attended by constitutional symptoms: head ache, vomiting, intestinal derangement and fever. It would pass as one of the common illnesses so fre-

quent at the time of childhood but for the remaining paralysis.

The duration of this stage may be from a few hours to a week; generally two or three days.

2. There follows a stationary period lasting from a week to a month; constitutional symptoms disappear but the paralysis remains.

3. A stage of partial recovery.

4. Chronic stage.

It will be seen that the disease is of acute onset followed by paralysis of certain muscular groups, or of certain members. It is a flaccid paralysis; the reflexes are lost, the muscles affected no longer contract to faradism and the reaction of degeneration is present. The tissues waste and the circulation is impaired.

The diagnosis cannot be made before the stage of paralysis. I know of nothing it can be mistaken for after the paralysis becomes manifest, if the patient is stripped, examined and a history obtained; yet I have recently had a case sent to me from an adjoining town in the chronic stage with all the contractures and deformities which are characteristic of the disease, with a diagnosis of hip dislocation, the diagnosis being made by an osteopath.

CASE I. A little girl seven years old gave a history of having gone to bed perfectly well some three weeks previously and during the night was awakened with nausea and vomiting, some fever and a pain in back and legs. Fever lasted three or four days, with perfect recovery, except loss of power in right leg and thigh. When seen by me she had almost total paralysis of the peronei and quadriceps extensor, loss of reflexes with flabby muscles; diagnosis of anterior poliomyelitis was made and treated accordingly.

Result.—Entire recovery after three month's treatment.

CASE II. Boy two and one half years old. Seen in consultation in an adjoining town. At the time he had pneumonia, but gave a history of never having been able to walk; also in his early life had a very severe attack of diarrhoea with fever; some question in the attending physician's mind as to rickets. At a later examination reflexes lost, only evidence of power in either leg was in calf muscles, muscles very soft and wasted, no reaction to faradism, deformity of contractures beginning. Hollow foot and slight talipes equino-varus. The condition was at least a year old; the only treatment advised was to push nutrition to the highest point with massage and apparatus to check and control deformity.

* Read before Fayette County Medical Society.

FLAT, WEAK OR SPLAY FOOT.

This is a condition to which this entire paper could be devoted without enough being said on the subject. It is surprising the number of people suffering from weak foot. No diagnosis is made or an incorrect one, the favorites being growing pains, rheumatism, or weak ankles. The term flat foot is unfortunate because it is misleading; the term weak foot is much to be preferred, and even that is not entirely satisfactory, as there are cases where not a symptom is referred to the foot; but all the pathology is located there. There are many classes of weak foot similar in type, but varying greatly in severity according to the local condition, the disturbance of function, the occupation and susceptibility of the patient. The first symptom is usually a sensation of weakness in the inner side of the foot, or ankle; the patient begins to recognize a feeling of discomfort during exertion and his inability to do his usual work with comfort. Sometimes a sharp pain radiates up the calf from the center of the heel, or from the center of the arch or anterior attachment of the plantar fascia; often there is a severe aching in the calves, sometimes in the thighs, and in women there is frequently backache. The foot is often cold, swollen and congested with increased perspiration. The patient complains that he can not get shoes to fit any more, and he recognizes that his foot is weak and vulnerable and that he has what he calls weak ankles, rheumatism, sprain, or gout. So much for the patient's side of it. Now when you examine the foot you are likely to find no deformity at all. I want to emphasize that point. The first deformity is apt to be that of eversion or abduction of the foot, from the medio-tarsal joint forward. The surest thing to be found on examination of the foot is limitation of motion, especially that of adduction; the points of tenderness are over the navicular bone; deep pressure causes acute, sharp pain.

This condition may occur at any time of life, but is often found in growing school boys who play games a great deal, in young men who have settled down to an occupation that requires them to be on their feet a great deal, and follows traumatism. I have seen dozens of cases following Pott's fractures where the principle of putting the foot up adducted had been neglected. No matter what the symptoms may be, if you are in doubt, put the patient at rest and if the symptoms are temporarily relieved, you probably have a weak foot to deal with. I would like to say more about this condition, pathology, etc., but I will report two cases and pass on:

CASE III. Miss Spencer, white, age 22,

referred to me by Dr. David Barrow for diagnosis and treatment. Gave a history of having sustained an injury of the ankle joint two years previously, which injury was probably an incomplete Pott's fracture. Had not walked on the foot since without support, or marked limp. Examination showed foot slightly swollen, cold, with a tendency to increased perspiration. Foot slightly everted, or abducted from medio-tarsal joint forward. Limitation of motion in all directions. Point of acute tenderness over the navicular bone. Patient complained of pain in bottom of foot radiating up calf and thigh when slightest weight was born on foot.

Diagnosis of flat foot following trauma was made, combined with hysteria (a diagnosis of hysteria had been previously made by a prominent neurologist of this city). Treatment under anaesthesia. By manual manipulation, all adhesions broken and muscular spasm overcome; normal range of motion established in all directions, when the foot was put in plaster of Paris at a right angle, in an overcorrected position. Plaster left on for two weeks, when it was removed temporarily for the purpose of making a plaster cast of the foot, which cast was used by instrument maker as a guide over which to mould the steel flat foot brace. Plaster was re-applied to foot and left on for two weeks longer when it was finally removed, and the patient kept in bed for a few days with the foot at rest, except for massage. After that, patient was up and around wearing the brace inside the shoe. She walked better than at any time during the last two years. Examination showed the foot to be normal. It was hoped that the manipulation and anaesthesia might relieve the hysterical condition as well, but in this I was disappointed.

CASE IV, is a representative of the milder type of flat foot which had not been allowed to progress, the kind so often seen in school children. Boy, white, age 7 years. Would come from school crying with pain in feet and calf muscles. Examination showed limitation of motion in all directions; some slight lowering of the arch in both feet. Point of tenderness over the navicular bone. Diagnosis positively flat foot. Treatment, plaster cast, model made of both feet as a guide for the instrument maker. This, I think, is positively necessary as the ordering of flat foot braces by measurement, or by the size of the shoe, is worthless. Braces fitted and worn inside the shoe with perfect comfort. No further pain or inconvenience.

Pott's disease, according to its modern interpretation, means tuberculosis of the spine. The most distinctive sign of Pott's disease is

deformity, a nuckle in the spine that is characteristically angular, and as its cause is loss and destruction of substance, its formation is accompanied by, and must have been preceded by, symptoms of bone disease. Deformity is merely evidence of a destructive process that may have existed for weeks, or months, and it is only by the recognition of the symptoms of this destructive process we can hope to prevent the deformity. For if once the deformity exists, it can be improved but never corrected. I do not believe the fact is generally recognized that the diagnosis of tuberculosis of the spine, before the stage of deformity, is not only possible, but easy, by the same methods that apply to other affections not attended by external deformity. It is to the application of the differential diagnosis that I wish to call your attention.

In the first place the spine is the location most frequently affected, almost as frequently as all other bones combined. It is evident since the spine is the chief support of the body, and the motion accommodates itself to every motion of the trunk or limb, that a destructive process must cause pain, weakness and impairment of normal motion. Now, support and motion are not the only functions of the spine. It contains the spinal cord which gives off the spinal nerves, and their origin may be early involved in the inflammation and destructive process, causing a sudden paralysis which may overshadow the early symptoms of Pott's disease and lead to error.

Tumor, due to abscess formation, may press on important organs adjacent to the spine, and cause peculiar symptoms that would overshadow the primary disease. So it is well to bear these facts in mind. But to return to the primary and diagnostic symptoms and signs of Pott's disease, which are pain, muscular rigidity, weakness, awkwardness of motion, and deformity: one might expect pain to be located in the diseased vertebra and that pressure over the spinous process would elicit pain and tenderness. This is not so, because the nerve filaments that supply the bodies of the vertebra are insignificant in comparison to the rest of the nerves that supply other organs and the limbs, so the pain is most often referred to other parts; hence ear ache, belly ache, and sciatica become symptoms that must be considered. The pain is by no means constant, and is most often caused by a jar or sudden and unexpected movement, very often during sleep when muscular relaxation allows the diseased parts to move upon one another causing pain and night cries. Stiffness, or muscular rigidity accompanying Pott's disease is both voluntary

and involuntary. It is the most important early sign. The voluntary presents in attitudes and movements to protect the diseased area from jars and sudden strain; the involuntary muscular rigidity causes limitation of motion varying from absolute fixation of the spine to a slight limitation of extremes of normal motion. It is always present preceding deformity and continues throughout the course of the disease. Weakness is evidenced by disinclination to walk, refusal to stand alone and the constant search for support at an early stage of the disease.

Awkwardness is caused by pain, muscular rigidity and weakness. Deformity in its early stage consists of a markedly angular nuckle in the spine. This, with a history, makes the diagnosis at sight. Pott's disease of the sacrum and the last lumbar vertebra is often without deformity, or deformity is delayed until later in the disease. There can be no doubt but what the majority of mistakes in diagnosis are made by a careless and insufficient examination of the patient.

Hip joint disease manifestly belongs to this class of orthopedic conditions, but I have omitted it as we have an essayist on that subject alone.

ULCERATIVE ENDOCARDITIS *

By JOHN G. CECIL, M. D., LOUISVILLE, KY.

Prof. Mat. Med. Therapeutics and Public Hygiene, University of Louisville.

Ulcerative endocarditis is synonymous with malignant endocarditis and infectious endocarditis. The latter term is probably the most correct, since the germ origin of the disease is unmistakably established. Ulcerative or malignant endocarditis is to be differentiated from benign endocarditis, both of which are acute and both of which are generally due to bacterial infection. Either form may terminate in chronic endocarditis, although tendency to chronicity is by far more characteristic of the benign form, such as is seen so often as a manifestation of acute articular rheumatism, than it is of the malignant form seen frequently in the course of pneumonia or septicaemia. It is not uncommon for the malignant form to be implanted on the chronic form of benign endocarditis producing a new and often fatal train of symptoms. It is therefore necessary to study these two conditions separately, and it is to the ulcerative form of endocarditis that your attention in this paper is asked.

The bacteria implicated in the production of ulcerative endocarditis have been studied in

* Read before the Jefferson County Medical Society, October, 1904.

recent years by many observers and the results of these observations are summarized by Dreschfeld as follows:—

"1. In nearly all the cases of infective endocarditis, whether ulcerative or not, microbes were found.

"2. In most cases only one organism was found, but in a few, more than one.

"3. The organism found was not the same in all. In many cases an organism was found which occurs in other infectious diseases, whilst in some an organism occurred not hitherto found in other diseases. These organisms were divided into two groups; in the first were the streptococcus pyogenes, including the streptococcus of erysipelas; the staphylococcus pyogenes aureus and albus, the pneumococcus, the typhoid bacillus, the tubercle bacillus, the bacillus of diphtheria and the gonococcus. In the second group were three forms of bacillus endocarditis (griseus, rugatus and capsulatus) described by Weichselbaum, the bacillus immobilis et foetidus, the bacillus of Gilbert and Lion, the bacillus of influenza, and a few others of less specific character.

"4. In most cases the microbe found in the diseased valves was also met with in such secondary deposits as infarcts and metastatic abscesses.

"5. The organisms most frequently found were the streptococcus pyogenes, the staphylococcus pyogenes aureus, and the pneumococcus.

"6. Experimental investigations on animals for the purpose of producing endocarditis have led to diverse results. The majority of experimenters have only succeeded in producing endocarditis by injuring the aortic valves shortly before injecting the cultures into the jugular vein.

"7. The examination during life of the blood of persons suffering from infective endocarditis has shown in some cases the presence of microbes of septic kind".

Aside from the role played by bacteria in the causation of infective endocarditis, we have to recognize other etiological factors. Whilst occasionally the disease is seen in persons of sound constitution and good health, it is observed generally in those whose systems are debilitated by disease and pernicious habits. It is seen in males oftener than females, though it is doubtful if sex has any bearing upon the causation of it. Males are more subject to diseases which induce chronic valvular heart disease, and previously diseased valves being a big factor in the development of ulcerative endocarditis explains the preponder-

ance in the male sex. It is rarely seen in the very young, only a few cases under the age of ten having been reported. The majority of cases occur between twenty and forty. Doubtless many cases in young children are not recognized on account of the uncertainty of symptoms and the consequent difficulties in diagnosis.

The role of infectious diseases is well recognized and has been sufficiently emphasized. Now and then it occurs in acute articular rheumatism and chorea; recent observations of English observers would indicate more frequent occurrence subsequent to acute rheumatism than has hitherto been recognized. Pregnancy and the puerperal state undoubtedly favor the occurrence of this form of endocarditis, when sepsis supervenes. Inflammation of the gall bladder and biliary passages sometimes give rise to ulcerative endocarditis. According to Osler about three-fourths of all cases of ulcerative endocarditis are preceded by chronic valvular disease. Traumatism and climatic conditions are by some observers thought to have a bearing in the production of this disease. Thayer and Lazear have shown conclusively that gonorrhoea may be a cause of ulcerative endocarditis. They set up the claim that the endocardium may be directly attacked by the gonococci in the circulating blood.

The morbid anatomical changes vary widely in different cases. The principal lesions are exhibited in the heart, but the majority of cases show secondary changes in other parts of the body. Of the parts of the heart affected Osler gives the results discovered in 209 cases as follows: "Aortic and mitral valves together, 41; aortic valves alone, 53; mitral valves alone, 77; tricuspid in 19; pulmonary valves in 15; and the heart wall in 33 instances. In 9 instances the right heart alone was involved; in most cases, the auriculo-ventricular valves".

Other statistics examined give about the same figures. Valvular aneurism is seen commonly as a result of the ulceration. Sometimes perforation of a valve occurs, or the chordae tendinae may be ulcerated through, permitting the valve segment to flap to and fro.

About 75 per cent. of these cases show old sclerotic changes in the valve.

The secondary lesions due to embolism will vary according to the organ affected, and according to the infective property of the emboli. Infections occur in the spleen, kidney, liver, brain, stomach, intestines, or any of the extremities, and if the right heart is affected the embolism may be in the lungs. The lesions in the skin and mucous mem-

brane are in many instances due to small capillary emboli.

The symptoms of malignant endocarditis are so varied and diverse that a clearer and better understanding is reached by separating the cases into groups. The types, or groups, given by most authors comprise; (1) The septic or pyaemic. (2) The typhoid. (3) Cerebral. (4) The cardiac.

The heart symptoms are often insignificant or even entirely absent, and especially liable to be overlooked when ulcerative endocarditis complicate such grave diseases as puerperal fever, pneumonia, septicaemia, empyema or meningitis. The heart symptoms may also escape notice in an acute attack of malignant endocarditis grafted on to an old valvular disease that has remained quiescent a long time, simply because no changes have taken place in the existing murmurs that would be recognizable to any but the most vigilant observer.

The symptoms usually seen in the septic type, such as complicates puerperal fevers, are a sudden onset, with rigors or severe chills, high fever which is often remittent, hurried and superficial respiration, rapid feeble pulse, headache, delirium, dry furred tongue, anorexia, vomiting, and sometimes tympanites and diarrhoea. The skin may show erythematous rashes, ecchymoses or superficial abscesses. Metastatic abscesses and infarcts in any organ may form in this the same as in the other types, but they are frequently not discovered. Duration as a rule is one or two weeks.

The typhoid type, as its name indicates, more closely resembles enteric fever. The heart symptoms may be very indefinite or absent. The general aspects of the disease, such as the brown furred tongue, diarrhoea, petechial eruption, are similar to typhoid fever. The fever is continuous but more irregular, more abrupt in onset and generally accompanied by rigors and sweats. Embolism into spleen, kidney and brain are frequent. Duration is usually two or three weeks.

The cerebral group comprises cases complicated by meningitis, beginning with brain symptoms, as headache, somnolence, and going on to unconsciousness or coma. Heart symptoms here are often absent; embolism or infarction occurring in the course of the case attract attention to the heart.

The cardiac type of the disease is by far the most common. These are the cases that occur in those the subject of chronic valvular disease by the introduction of microbial organisms into the blood current. Many of these cases run quite a chronic course extending over months or years time. Depending

on the nature of the infection some of these cases run a rapid and fatal course, partaking more or less of the pyaemic type.

Of other general symptoms, enlargement of the spleen and liver are frequent. The kidneys may be engorged and symptoms pointing to disturbance in these organs are observed in many cases, though swelling or redness is not always seen. "There is nothing in the character of the bruits or in the size of the heart to enable us to diagnose infective rather than benign endocarditis. Even haemic murmurs are difficult to differentiate. It is the symptom complex and by exclusion of other diseases that the diagnosis is arrived at. The differential diagnosis, however, is often exceedingly hard, sometimes impossible. Many cases are only made out in the dead room.

The prognosis is always serious, generally fatal. The course of ulcerative endocarditis varies from a few days to a few months.

Treatment of this affection has hitherto been rather unavailing and unsuccessful. Fraentzel has recommended quinine in large doses, with arsenic. This appears to be a combination that does good in some cases. Quinine, the alkalies, salicylates, phenacetin and many other drugs, have had their advocates. General treatment with tonics, stimulants and rest, is generally resorted to; the results are generally bad. The free administration of alcohol to combat the general sepsis offers about as good a prospect of relief as any other drug treatment.

The injection of streptolytic serum in recent years, as a treatment of malignant or infective endocarditis, has attracted favorable attention. Several flattering reports limited to small numbers of cases have been published. Upon theoretical grounds this should be an ideal treatment. Should the infection be from streptococci then the subcutaneous or intravenous injection of antistreptococcic serum should do some good. It is to be hoped that very soon some bacteriological genius will provide us with a polyvalent serum that will combat all forms of pyogenic organisms. This would enable us to treat this dreadful disease with reference to its cause. It is hardly possible that mineral germicides could, with safety, be introduced into the blood in sufficient quantity and strength to be of much service. Our hope then must be in sero-therapy. Successful results from the use of antistreptococcic serum have been reported by Sir Douglas Powell, in three cases; by Sainsbury; by Pearce, by Clarke, by Bryant, by Moritz, and by Ogle. Unsuccessful results from the use of the streptolytic

serum are reported by J. H. Abram, by Nathan Rau, by Glynn, and others.

To conclude with a quotation from Dr. Beverly Robinson's admirable article (*American Journal Med. Sciences*, April, 1904):

"I would insist upon the primary importance in all cases of beginning the use of the serum at an earlier date than has been hitherto done. Sometimes, not to say frequently, it has been employed when all curative methods must prove futile, as the economy is unable to respond favorably to that as to all other medication. Also, that to obtain the best curative effects the serum should be given intravenously, and should be continued well into the period of convalescence, inasmuch as death occurs sometimes when all danger seems to have passed."

In the preparation of this paper I wish to acknowledge my indebtedness to many authors, Babcock, Dreschfeld, Beverly Robinson, Osler and others, from whom I have borrowed freely.

Report of a Case.—The following very interesting and instructive case came under my personal observation a short time ago: A little boy, aged six, whose family history was exceptionally free from hereditary taint, and whose personal history gave no suggestion of previous disease that could have any bearing upon the attack now to be reported, had what appeared to be an ordinary attack of influenza common to children of that age. The attack lasted one week and was complicated toward the end by otitis media, developing simultaneously in both ears. The drum membranes ruptured spontaneously, the purulent discharge ceasing after a few days under local antiseptic treatment. The hearing was unaffected. Subsequent repeated examinations by two eminent aurists failed to discover any evidence of lingering internal ear disease, or extension of trouble into the mastoid, or other sinuses, or brain.

The little fellow was left after these attacks in a weakened condition, anaemic, rather feverish and with an indifferent appetite. Near the end of the second week of his illness he began having irregular rigors, chills, fever and sweats, and along with these a distinct heart murmur was discovered, heard most plainly at the apex and transmitted under left axilla and scapula. The chills and fever were supposed to be of malarial origin and the murmur was thought to be haemic. This state of things continued for another week; often only rigors, sometimes decided chills were observed, the fever frequently rising as high as 105 degrees and falling rapidly to normal, or a little above; sweats were free. These excursions of temperature were irreg-

ular, generally occurring once in twenty-four hours, sometimes twice daily.

This was the history of the case up to the third week when he first came under my observation. At that time his pulse was regular, fairly good in volume and strength, varying with the fluctuations of temperature from 90 degrees to 120 degrees. His temperature varied from 99 1-2 degrees to 104 or 105 degrees. There was general pallor, variable appetite. He complained of no pain, no dyspnea, no cough. A loud systolic bruit was heard most distinctly at apex and traceable under left scapula. Typhoid fever, remittent malarial fever, miliary tuberculosis were considered and excluded in the differential diagnosis.

During the next, or fourth, week of his illness he developed numbness and motor paralysis of the left arm and left leg, which did not appear to be of central origin. This local paralysis improved before the end came. At one time there was a fleeting rash over the greater part of his body; this was not observed by me. Intellection was clear until a short time before death. He failed gradually and died from asthenia after an illness of four weeks. No autopsy was obtained.

I think there can be little question but that this was an infectious endocarditis. It is unusual on account of the extreme age (6); only a few cases have been recorded under the age of ten. The source of the infection was, first, the influenza, and second, the suppurating ear disease. The symptoms upon which the diagnosis was based were: the opportunity for infection, the typical fever of sepsis, the heart murmur, the paralysis of the left arm and leg, evidently due to emboli, and also the rash and absence of diagnostic symptoms of other diseases.

* * * * *

DISCUSSION.

Dr. H. A. Davidson: While I did not hear all the doctor's paper, what I did hear was very interesting, and there is very little that I can add. I would like to ask the doctor one point about ulcerative endocarditis due to rheumatism. I do not know whether he laid stress on that or not. I was much interested in reading some inoculation experiments of Drs. Poynton and Paine in which they claim a great many cases of ulcerative endocarditis are due to rheumatism. They claim to have discovered the diplococcus rheumaticus that causes rheumatism. They have injected this germ into rabbits and have produced ulcerative endocarditis in many cases. They examined a number of patients, among them several children, in whom they found ulcerative endocarditis following rheumatism.

Many probably will not agree that rheumatism

is due to the diplococcus rheumaticus, but their experiments seem to have proved it conclusively. I thank the doctor for his paper.

* * * * *

Dr. Cecil, in closing: I was familiar with the reports referred to by Dr. Davidson, and I mentioned in the early part of my paper that acute articular rheumatism was given as a cause of ulcerative endocarditis, but I do not think that we can consider the poison of acute rheumatism as commonly a cause of this form of endocarditis. I do not believe that the question of the etiology of acute rheumatism is yet settled, and until it is we shall have to wait for further experiments. In my judgment, it can hardly be regarded as a common cause of ulcerative endocarditis, simply from the fact that in clinical experience alone we see many cases of rheumatism that develop the benign form simply as a manifestation of the rheumatism, but comparatively seldom see ulcerative endocarditis occurring except as a suppurative disease. The large joints of the body and the heart are equally the seat of infection of this poison, whether it be due to a germ or some other cause; we seldom ever see a rheumatic joint affected in such a way as to lead to suppuration. I cannot recall in my experience that I have ever seen a true rheumatic inflammation terminate in suppuration. If it does not terminate in suppuration in the joint, it is rather improbable that the rheumatic poison as we see it in every-day cases, would act on the heart in that way. I did not include this as one of the common causes of ulcerative endocarditis for the reason that I did not think that the fact was established.

I regret very much that in the case which I report a blood examination was not made, but the situation was such that we could not well carry it out. Of course there is a question of the diagnosis that will always have to remain unsettled. There was a difference of opinion among the consultants as to the diagnosis, but I believe the case made out for ulcerative endocarditis was stronger than could be made out for any other disease that would in any way resemble the attack from which he died.

PROGRESS IN GENERAL MEDICINE.

Under the Charge of A. J. FLEXNER, M. D., Louisville, Ky.

INTERMITTENT HYPERCHLORHYDRIA AS AN OCCASIONAL CAUSE OF RECURRENT VOMITING IN CHILDREN.

{By Irving M. Snow, Buffalo, N. Y. From the American Journal of the Medical Sciences, December, 1904.]

The author gives as his reasons for directing attention to the above condition as (1) "that the condition is not as rare as generally

supposed," (2) that it is relatively easy of diagnosis, an examination of the vomited matter being the most important, (3) that at least in some cases of gastric irritability is due to an intermittent hyperchlorhydria, a secretory neurosis, causing the sudden hypersecretion of HCl and gastric juice. The vomiting is the main symptom and comes at times like a bolt out of a clear sky. Among the many theories advanced for its causation and symptomatology that of Edsall which the author quotes, has been at least the basis for a rational and in the main successful therapy. Edsall's idea is that cyclical vomiting is caused by an acidosis, a cryptogenic acid intoxication, resembling the intoxication causing diabetic coma. The proof is the odor of acetone in the breath and the presence of acetone, diacetic acid and oxybutyric acid in the urine during the attack. In four of Snow's cases the fluid vomited was apparently pure gastric juice containing an excess of free HCl and mucus and in the fifth case the hyperacidity was due to combined chlorides." The diagnosis is not always easy. The suggestion of Dr. Snow to analyze the vomited matter is an excellent one and it is curious that so evident a step has not been taken before. When the attacks have occurred before and vomited matter gives the reaction for gastric juice with excess of HCl and especially if acetone and diacetic acid are present in the urine, with or without albumen and casts the diagnosis would be simplified, and the institution of a vigorous alkali treatment ought to be instituted at once. Edsall has recommended rectal use of 3 per cent solution of sodium bicarb. and has used a more diluted solution with success intravenously in conditions similar to this, when administration by the mouth was impossible.

* * * * *

Lambert gives the credit for our present knowledge of gastric ulcer to Cruveilhier who first accurately described the condition in the last century, about 1830. The author states that the indications for treatment must depend on the general and local conditions present in the patient. He calls attention to the anaemia and the hyperacidity and the possibility of stagnation of food, gastric irritability, nausea and pain. The therapeutic indications are arranged by him as follows:

"I To assist nature in the process of repair.

"a. By regulation of diet.

"1. To protect the ulcer from mechanical injury and consequent further extension of the ulceration.

"2. To keep the ulcer at rest.

"b. By the administration of drugs:

"1. To stimulate cicatrization.

"2. To cover and protect the ulcer from chemical irritation.

"3. To neutralize the gastric acidity, whether due to the normal acid or to any of the abnormal acids of fermentation.

"c. By improving the general health by careful feeding and hygiene.

"II. To prevent loss of flesh and strength by feeding through other channels than the stomach.

"III. To combat individual symptoms and complications as they arise.

"The two cardinal points in every ulcer cure are rest and milk diet." All such patients should be put to bed and kept there for such a period until the characteristic pain and tenderness consequent upon the taking of a mildly varied diet shall no longer appear.

"This means that a sufficient period must elapse to allow the patient to pass through the various stages of stomach starvation, milk diet, fluid diet of broths and milk, diet of fluids, eggs, bread, butter, cereals and lighter meats."

The rest in these cases need not be as absolute as in some graver cases of either nervous or mental disease, but should be accompanied by alcohol rubs, massage and injunctions of a bland oil, while the visit of a judicious friend may be permitted. During the period of stomach starvation small amounts of water and ice may be allowed. The author advises the treatment to begin with a lavage of the colon using about four quarts of a saline enema. Then after an hour the nutrient enema may be given and it should not exceed four ounces in bulk, it should be completely peptonized by the Fairchild process and may consist of eggs, milk or meat broths singly or in combination. The author states that in mild cases stomach feeding may be renewed in four days and in severe cases a week or more may elapse. The stomach feeding should begin before the bowel becomes intolerant, and when this is done only milk which is completely peptonized should be used. He very correctly states that such milk is not appetizing and the writer has seen it promptly rejected by a sensitive palate and aggravate instead of improve the conditions. Instead of such distasteful milk the writer agrees with the author that much may be learned from the principles of infant feeding and prefers to begin with skimmed milk or a diluted milk and gradually come up to a whole milk diet. The author pays scant attention to the nitrate of silver cure, which in several instances of milder forms of ulcer in the writer's care has appeared of great service. He also reviews the bismuth cure of Fleiner and the olive oil cure of Cohnheim which have strong adherents in Germany. Both are sub-

ject to criticism of requiring the use of the stomach tube; the first probably in less degree than the last. But while in expert hands the dangers of using the stomach tube may not be great it is nevertheless true that in an ulcerated stomach only the necessity for removing stagnant contents has appeared to the writer to justify a procedure which has connected with it the possibility of damage of a serious nature. For this reason the author leans to the more rational method outlined. For active hemorrhage the treatment advised is absolute rest; hypodermic use of morphine and finally resort to surgical aid, when the condition does not rapidly improve. For the contractions and adhesions which follow even cicatrization of the ulcer, for the relief of pyloric stenosis, motor insufficiency, dilatation which frequently follows the ulcerative process only surgical relief ought to be considered and all experience tends to show that the earlier the proper operation is performed the better are the results obtained.

* * * * *

SOME UNSETTLED AND IMPORTANT PROBLEMS IN THE TREATMENT OF ACUTE LOBAR PNEUMONIA.

[By Beverly Robinson, M. D., New York. From the American Journal of the Medical Sciences, December, 1904.]

Dr. Robinson in the above article has added another to his former interesting articles on pneumonia. Recognizing the pneumococcus of Fraenkel as the efficient cause of acute lobar or croupous pneumonia he recommends the use of slightly acid mouth washes and gargles in the prophylaxis of the disease and this especially in those who are nursing a case or are exposed by attendance upon one.

He also speaks highly of the value of creosote vapor in prophylaxis and evidently regards its use throughout the disease as of value. The best method by which this purpose may be accomplished is to keep a croup kettle going at intervals day and night. Naturally the urine should be watched and at the first sign of albumen in the urine especially if the urine becomes dark or smoky it ought to be discontinued. The writer is of the opinion that he has prevented (?) at times the development of pneumonia, especially in children, by this method of using creosote. The question of removal to the hospital is not to be decided by any fixed rule. Undoubtedly such patients ought not to be treated in the wards of any hospital. The author calls pointed attention to the necessity of prompt and early treatment. He says: "There is one thing to which I wish to direct careful attention in this connection, and one far too often overlooked practically in the

treatment or estimate of even virulent disease and particularly when the poison is very intense in quality if not in quantity. *The time of the treatment* when begun is most important—essential and decisive at times in regard to the ultimate outcome of the disease. By doing the right thing at the right time life may be saved; when there is delay in doing the right thing life may be lost. The analogy here which I would refer to is the use of anti-toxin in toxic diphtheria. Made use of in the beginning in sufficient doses the patient will probably recover; delayed in its use, or given in too small amount and not repeated, the patient may die. The patient will *surely die*, sometimes even with the help of a most wonderful remedy. So I believe it to be in a measure with the treatment of acute lobar pneumonia. Put your patient to bed immediately on the advent of serious symptoms of the disease, in a large sunny, well ventilated room; provide him with the best nurses and good milk and water; begin immediately antiseptic inhalations and use all our other curative means, sensibly, judiciously, appropriately, and I believe many bad cases will be saved. But delay these primary and efficient though simple means too long, and the patient will often die. He will die because the poison of the disease has taken hold of him too strongly, in too large quantities before proper and suitable means have been employed to check or throttle it." The author warns against the abuse of morphia or other opium derivatives, especially when acute nephritis is grafted on to the disease and writes in the same way of the abuse of digitalis and strychnia. The latter alkaloids he says in overdoses does harm. Of the stimulant value of cocoa and coffee he has a good word to say and the sane use of the normal saline solution, especially as a rectal injection meets his approval. Of oxygen at the proper time and in the proper way he approves. The author states that there is a proper place for alcohol and that its proper use may tide over "an imminent crisis," but he wants his whisky, brandy or champagne pure and condemns in strong and reasonable terms the miserable penuriousness which provides cheap liquors for such cases. His conclusions are as follows: "1. To begin judicious, rational treatment immediately and to continue it during the attack.

2. The most useful *single agent* in treatment, as preventative and curative, is creosote, and preferably as inhalations properly given and continued for a sufficient length of time.

3. Strict avoidance of extremes of treatment in any direction, whether it be toward the use of so-called specifics or the employment of

certain drugs, notably digitalis and strychnia.

4. It should be graven on our minds that pneumonia may be throttled or minimized most surely in the beginning. Later, when the disease is fully developed, our role is inferior, but should consist mainly in doing least harm.

5. Harm proceeds almost invariably from ignorance or undue enthusiasm."

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THE DIAGNOSTIC VALUE OF LEUCOCYTOSIS.

[By G. N. McCaskey, M. D., Fort Wayne, Ind. From the American Journal of the Medical Sciences, December, 1904.]

McCaskey calls attention to the remarkable fluctuation in the number of leucocytes in the peripheral blood under varying conditions and refers to the disappointment which has attended the attempt to use these phenomena as either diagnostic or prognostic aids. The author thinks this has been done "with more haste than discrimination" and draws a parallel between the irregularities or "bizarre tendencies" of leucocytosis and the variations or anomalies of the temperature and pulse curves, "to which nevertheless a high value is assigned." In general he follows the Ehrlich classification of the leucocytes and states that for clinical purposes the lymphocytes, the neutrophiles and eosinophiles are the ones which are of most importance. The increase and decrease of the number as well as the character of the leucocytes depend upon a positive or negative chemotactic substance in the circulation. Before a leucocytes can exist a chemotactic substance like the toxins of the streptococci or staphylococci must be present in the blood, other toxins like those of typhoid or tuberculosis either do not increase or exert a negative chemotactic influence and hence diminish the number of leucocytes—this influence being mainly asserted on the neutrophilic leucocytes. The author states: "If the anatomical conditions are such that the toxins cannot to any great extent enter the circulation a leucocytosis of diagnostic significance may be entirely absent." Such conditions obtain in encysted or walled off pus accumulations and ought always to be considered in appendicitis or encysted empyema of which an illustrative case is cited. Opie's work with reference to eosinophilia is evidently considered conclusive by the author and the importance of this form of leucocytes in the diagnosis of trichiniasis and other forms of parasitic invasion is emphasized. The author accepts the available evidence experimental and clinical as pointing to the lymphatic apparatus as the source of the lymphocytes. He states "clinically an increase in their number is constantly associated

with disease of the lymphatic system and the well known tendency of tuberculosis and syphilis to implicate the lymphatic glands is the probable explanation of the frequent occurrence of lymphocytosis in these two diseases." The same state of case exists in pertussis. In closing his excellent paper on this important topic the author sums up his conclusions as follows:

1. "A routine enumeration of the white cells in the peripheral blood is of sufficient importance to be made a regular procedure so far as possible in all cases.

2. "A single leucocyte count is entirely insufficient as a basis of conclusion in any case and should be followed by several made under different conditions.

3. "An increase beyond ten or twelve thousand leucocytes in the peripheral blood indicates varying grades of intoxication, with chemotactic substances of some sort or another.

4. "Whether it indicates suppuration or not is a question to be determined by carefully weighing all the facts in each case.

5. "The leucocytes indicating suppuration and allied processes are of the neutrophile type.

6. "The eosinophile form of leucocytosis indicates among other things and perhaps principally cutaneous or parasitical disease in the intestine or elsewhere.

7. "Lymphocytosis clinically signifies an irritative lesion of the lymphatic apparatus.

8. "A differential count should be made in all cases to determine the type of cell which has been the subject of the principal increase where such increase exists and which records carefully kept and collated as a basis for the determination of the clinical significance of leucocytosis in the future.

9. "In the diagnosis of malignant disease a leucocytosis is of very subordinate nature and when present is not due to the malignant disease, per se, but to coexisting chemotactic toxins."

THE DIAGNOSIS AND TREATMENT OF THE EARLY STAGES OF TABES.

[By Prof. Tr. Schultze, in Bonn. From the Deutsche Med Wochenschrift, November 24, 1904.]

This article is a plea for the early recognition of tabes dorsalis and its prompt treatment by vigorous antisyphilitic measures. The author warns against the exclusive dependence on the Romberg symptom, while giving a positive reaction its proper weight. He depends for the diagnosis upon the history, especially if syphilis has been present, upon the pupil reactions, the absence of the tendo Achilles reflex and the various visceral crises which occur. The ataxia is a late manifestation and ought not to be waited for in

order to make the diagnosis. In addition to a vigorous mercury inunction cure and the intermittent use of the iodides he cautions against abuse of alcohol, tobacco and excessive venery. And he aptly says that the advice must be for life. His remarks about mistaking the disease for rheumatism and his condemnation of the bath cures, especially such as entail shocks of any kind must meet the approval of all who have had the care of cases which have been so treated. The writer has recently expressed himself fully along the same lines as Prof. Schultz and is in full accord with his views and it is an encouraging sign to find that as the etiological role of syphilis in the causation of tabes is becoming known so the fact that early and vigorous antisyphilitic treatment and sound hygiene are the proper and best modes of staying the progress of the disease are likewise overcoming the dicta of some authorities against their use.

GENERAL NEWS.

World's Fair Medal for Hospital Designs.

—It is announced that a gold medal has been awarded to Meyer J. Sturm, architect, and Dr. A. J. Ochsner, both of Chicago, for hospital plans exhibited at St. Louis. The notification has been received from the president of the superior jury. The plans were entered under charities and corrections, class 139, and consist of complete plans of four hospitals—a city hospital, a country hospital, a hospital for towns, and a hospital for the treatment of contagious diseases. The latter plan presents a radical departure from any existing hospital structures now in use. Dr. A. J. Ochsner is head surgeon of St. Mary's, of Nazareth Hospital and the Augustana Swedish Hospital.—(New York Medical Journal, Dec. 10, 1904.)

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Annual Meeting of Association for the Advancement of Science.

—The annual meeting of the American Association for the Advancement of Science and of the societies affiliated with that organization, will be held at the University of Pennsylvania during the holidays. The Honorable Carrol D. Wright, commissioner of labor, president of the association, will deliver the annual address on the evening of December 28th, in the gymnasium. The association has at present about 4,000 members.

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National Mosquito Extermination Society.

—The second annual convention of this society was held in Manhattan and Brooklyn on Thursday and Friday, December 15 and 16, 1904.

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ORGANIZATION IN JEFFERSON COUNTY.

Jefferson county, together with the city of Louisville, contains between five and six hundred registered physicians. It is the largest and most important county in the State of Kentucky and it would naturally be expected that the work of organization of the medical profession would succeed better here than in outlying counties in the State. Yet such is not the case, and to the shame of the physicians of Jefferson county and to the spirit which animates them, be it spoken. There are some counties in the State where nearly all of the registered physicians are members of the county society, and there are many counties in which a majority of the physicians are members of the county society; but in the county of Jefferson only about one-fourth of the registered physicians are members of the county society. There must be a reason for this sparse membership and the purpose of this article is to attempt to ascertain the reason and to suggest a possible remedy.

The county society holds its meetings every two months, with a session in the afternoon and another in the evening. Its program is always a good one, but it is generally too extended, and on this account does not permit a full discussion of the various papers read, by many of the members present who feel inclined to enter the discussion if time permitted. The limited number of possible essayists has prevented the participation in the program of a large number of the members of the society as it now exists. If the society had the three hundred members which it should have, this limitation would be still more pronounced. We are convinced that the only way to make a good county society member is to have him an active, a participating member. To sit on a cold seat and listen to another fellow do all the talking is

not calculated to make a fellow feel that he is part of the show, and this feeling is absolutely essential to continuous enthusiastic membership in any such organization.

The Committee on Program has found it expedient and even necessary to always secure for the program some of the best known physicians of the city, and it is quite right that these men, whose names are of a kind to attract a good audience, should be given prominence on the program; but it is equally important that the less distinguished membership of the society, constituting the large majority, should also have the proper recognition. We might even say that we deem it of even greater importance that this element should be encouraged, or even forced, to take part in the program, for the county society is essentially a democratic organization, whose primal object is the development of the great body of the profession, development along all the proper lines of medical education and social good fellowship.

The great question, therefore, is, how can the county society be made an institution which will fulfill these indications, which will be a vitalized and vitalizing body, to whose meetings its members will look forward with pleasant anticipations, and from which they will come with that satisfied and satisfactory feeling of being better in some way, from some standpoint, for what they have seen, and *done*? The "done" is emphasized for the reason that we are convinced of the absolute necessity of making all the members *do* something, if not at every meeting, then occasionally, at any rate.

At the present time the county society meets every two months, but no member other than the secretary ever possibly carries the date of the next meeting in his mind. He knows that it will be a month or two off and that the secretary will notify him as to the exact time, and with this understanding he dismisses the matter from his mind.

Now, what such an organization needs, in the mind of the humble writer, is to have a fixed, definite time of meeting, with such a short interval intervening between meetings that no one can fail to remember the exact time of the next meeting. This could be accomplished by dividing the society into four, or more, sections and having a meeting on every Monday night. One week there would be the section of general medicine, the next week the section of surgery, the next week the section of obstetrics and diseases of children, and the week following a meeting for the various special branches, as neurology, ophthalmology, and so on. Each of these meetings could be presided over by its own

officers, a chairman and secretary, while the general officers of the society would only be called to preside over the general meetings, which could be held at intervals of two or three months. At these general meetings topics of wide general interest could be discussed, and at such times distinguished physicians from other cities, the president and ex-presidents of the A. M. A., for instance, or the presidents of the State Associations of neighboring States, could be invited to be present and make addresses on topics of wide interest and importance.

At such times also, if the society desired it, a banquet could be held for the dissemination of that good-fellowship and understanding which seems oftentimes only to come by the breaking of bread together.

The division into sections meeting every week under separate sets of officers would immediately result in placing these various sections in competition, and a generous rivalry would necessarily be produced, having for its object the securing of the best possible program for the attraction of a large, and interested and participating audience. Instead of having four meetings a year, or at least six meetings a year, there would be fifty-two meetings in the twelve-month. It can at once be seen that this would give a large opportunity for representation on the program of all elements going to make up a county society.

As soon as such an arrangement is perfected there will immediately begin, and would continually grow, an attendance on the part of physicians living out in the State and in the near-lying districts of neighboring States. Many of these physicians are hungry for an opportunity to brush up against their brethren, especially those in the city, and if they knew that they could always find a meeting of the county society in Louisville on Monday, many of them would make a point of timing visits to the city so that they could be in attendance at these meetings on Monday evenings.

This would work to the mutual benefit of both the city and the country physician, and would at once constitute an institution of great importance and advantage. This has been the experience of other cities, some of them our near neighbors, and there is absolutely no reason why it should not be the experience of Louisville also.

There is one factor in the city of Louisville which has militated in the past against the plan of meetings of the Jefferson County Society as here outlined, and this is the great number of medical clubs with a limited membership already existant in this city. Several years ago substantially the same plan here

outlined was proposed, carrying with it the further proposition that the various medical clubs should discontinue their meetings for the purpose of lending their strength to the Jefferson County Society. It was found that many of the clubs absolutely refused to discontinue their existence, while others were willing to so discontinue, provided the section meetings of the Jefferson County Society should prove to be a success. The yoke of the private clubs has continued in the past few years to grow heavier on the necks bearing it, and many of the members of these clubs would now be glad to give up membership in them, provided their places could be supplied by various sections of the county organization. The private clubs which might be unwilling to discontinue existence could at least be induced to establish affiliation with the county society by insisting that all members of such clubs should at the same time be members of the Jefferson County Medical Society.

The time is ripe for this move and there is every probability that a proposition looking towards its accomplishment will be offered in the Jefferson County Medical Society at its next meeting in February.

STREET CAR SANITATION.

The State Board of Health has deemed it within its province to take measures looking to the securing of better sanitary conditions in the railway cars of the State which are used for the transportation of human passengers. It is to be very much hoped that the State Board, or if not the State Board then some municipal authority, can see its way to apply like regulations to the street cars carrying passengers in our cities. To one who appreciates the value of pure air, or who has any regard for the esthetics of the olfactories, to enter one of our street cars at this season of the year is a positive torture. The human being may be separately and singly ever so clean and sweet; but when congregated in a hot closed space, he is filthy and offensive.

A very short time ago our city railway company was compelled by ordinance to heat its cars. This it did under protest, and has gotten more than even with the public by stopping up every nook and cranny through which any of the precious heat might escape, and so compelling the unhappy occupants of the car to support life for the ride by breathing each other's cast off breath.

Rather than endure such unhealthful and disagreeable conditions, many people prefer to go afoot, if the extent of the distance does not preclude walking. Others stand on the back platform, or with the driver at the front of

the car—anywhere and anything to escape the malodorous interior of the car.

Some years ago the ladies of the city of Louisville—blessings on them!—began a crusade against the spitting nuisance. An ordinance was passed prohibiting spitting on the floor or platform of the street cars. This resulted in a tremendous improvement; the lakes and rivers, which used to vary the landscape and alter the topography of the street car floors, are now seldom encountered. But ponds and brooklets remain still frequently and painfully in evidence. The most disgusting of all the habits of this filthy spitting beast, this swine in the outward semblance of a human being, is that of raising up the window board and spitting into the space between the inner and outer walls of the car.

There is a law against all this; is there no way of enforcing it? Has not the public a right to expect the railway company to see to it that the ordinance is obeyed? Most emphatically, it seems to us, yes! But does the railway company through its employees, its drivers, its motormen and its conductors, make any such effort? Most decidedly, no!

The abuse of spitting is indulged in freely without any special effort at concealment; conductors and inspectors, and city officers too, the policemen who so frequently adorn the rear platforms of the cars, gaze with indifferent eyes on this form of law-breaking, and desiring not to see, see not. This is the more to be deplored because a little determination in the matter of directing the attention of offenders to their transgressing, together with the gentle but firm assurance that the practice must *stop*, and that at once, would correct the evil entirely in a very short space of time.

KENTUCKY VETERINARY MEDICAL ASSOCIATION.

The *Kentucky Veterinary Medical Association* held its first meeting for organization at Louisville on November 24, 1904, an account of which will be found in another column.

The *Kentucky Medical Journal* gives the the new organization greeting, and wishes it a prosperous and successful future. The veterinarians represent a phase of medicine which has great practical and economic importance, as well as the same sentimental aspect presented by medicine in general, the alleviation of suffering, the restoration to healthful and agreeable function. The physician ordinarily glorifies himself because he relieves human suffering, with the accent on the *human*. It is equally glorious, however, and in many cases quite as remunerative, to

relieve the sufferings of animals other than the human animal, whose gratitude for the service is sometimes more pronounced and lasting than that of the human. The horse, the dog, the cow, the pig are all God's own as much as is the man; they are animated by the same divine spark of the great mystery, life, differing only in degree and kind of soul attainments.

The Veterinary Association desires to accomplish reforms in its field, and to bring about the enactment of laws in the State of Kentucky which will place the State in line with sister States which have shown themselves more progressive than we are. The *Kentucky Medical Journal* invites the Veterinary Medical Association to make use of its columns to make its desires known, and bespeaks a thoughtful consideration and a merited support on the part of the physicians of the State.

RESULT OF THE FIRST EXAMINATION TO PRACTICE MEDICINE IN KENTUCKY.

In another column will be found the report of the first examination held under the new law by the State Board of Health for license to practice medicine in Kentucky. The result of the examination shows that the Board is very much in earnest, terribly in earnest doubtless some of the applicants think. It will be observed that the lowest figure attained was by a graduate of the Chicago School of Psychology, which was as it should be. It can only be a cause of gratification to the people of Kentucky that incompetents are no longer finding a haven of refuge on the "dark and bloody ground," that Kentucky can no longer be made a dumping ground for the worthless professional rubbish and job-lots which have not been able to take root in adjoining States.

COUNTY SOCIETIES.

[Secretaries of county societies are requested to furnish for this column, and without further notice, all county society news of interest, such as the date and place of the monthly meeting, notice of death and marriage, epidemic disease, and, in fact, everything which might be of interest to brother practitioners in the State.]

The *Anderson County Medical Society* has passed the following resolutions of respect:

Be it resolved by the officers and members of the Anderson County Medical Society:

1st. That in the death of Dr. J. M. Jennings, of Tyrone, the Society has lost a faithful and industrious member; the State and

county a worthy citizen; the Government an honest servant; and the profession a skillful and progressive representative.

2nd. As members of this society, associated with him in the furtherance of medical science, and the cause of humanity, we deplore his loss as one which may never be healed in this life.

3rd. As a man and a physician, his life fully realized the highest ideals and as a Christian he was earnest and consistent in his daily walk.

4th. We hereby tender our sincere sympathy to his bereaved family.

5th. Resolved that a copy of this testimonial be spread upon the minutes of the next regular meeting of the Society; that a copy be published in the *Anderson News*, and a copy be delivered to the family of our deceased fellow-worker.

Respectfully submitted,

J. L. TOLL,

G. D. LILLARD,

Committee.

* * * * *

The doctors of Carlisle county held an interesting meeting at Bardwell Tuesday, a full attendance being present. It was the regular meeting of the *Carlisle County Medical Society* and various papers on diseases most prevalent in this section were read and discussed. Several of the members of the association are of the opinion that it was one of the most interesting meetings ever held. The visiting doctors were entertained at dinner by the local members of the profession at the Roberts Hotel, where a sumptuous feast was partaken of. The officers elected for the ensuing year are:

President—Dr. J. M. Peck, of Arlington.

Vice President—Dr. T. L. Lamkin, of Milburn.

Secretary—Dr. T. D. Bugg, of Bardwell.

Treasurer—Dr. H. T. Crouch, of Milburn.

Censor—Dr. F. N. Simpson, of Milburn.

A departure from the regular course of business was the selection of meeting places for a year ahead. In March the association will meet at Arlington; in June it will meet at Milburn; in September at Kirbytown, and in December at Bardwell again.

* * * * *

The September meeting of the *Franklin County Medical Society* was held at the State Institution for the Feeble Minded, with Dr. Hill as host. It is needless to say that it was more of a social than a professional meeting, as the banquet with its elaborate menu was more fully discussed than was the paper of Dr. L. T. Minnish, on "Typhoid Fever." Both, however, were excellent in their way.

At the close the following resolution was adopted:

The society's thanks are due to Dr. Hill
For the manner in which he filled the Bill.
His pulchritude had a lovely pull,
Because he filled the members full
Of a most delightful dinner,
Hugely enjoyed by every sinner.
Dr. Ely was so full of Course No. 1 [done.
Before the 10th was served he was surely
Although it sadly grieved his heart,
He had to pass the daintiest part.
Dr. Thompson was always a famous *Laster*,
Never being regarded as a faster.
Says he does not for an office pull,
His only wish—to fill the officer full.
Dr. Ginn was slow in beginning (came late)
But did full justice to his plate;
He, like the other hungry men,
Took courses from Nos. 1 to 10.
And sitting with him to the finish
Was his nearest neighbor, Dr. Minnish,
Who, though commencing with No. 1,
Staid by Ginn until he was done. (Garrett)
Our handsome young friend, Dr. Neville,
Through every course did simply revel.
Dr. Stewart sat with twinkling eye
And helped "the swallows homeward fly,"
And saw the corn come off the cob
By the attacks of Dr. Robb.
Dr. Allen, although his years are few,
To him such feasting was nothing new.
With sufficient practice 'till he is old,
With Ely a full hand he can hold.
Dr. Goodrich lacked nothing at the table;
To do ample justice he was fully able.
He was selected for our next amusing,
The subject being left for his own choosing.
Dr. Montfort had taxed his skill so often
That none his spirit hopes to soften;
But, like (old) Dr. Williams, is always ready
To hold the young men down to steady
Habits and pious example—the boys to keep
In virtue's ways and contentment sweet.
But the fairest of all at the repast
Was, like the "best wine", kept for the last
In our charming *confrere*, (Mrs.) Dr. Mastin,
Whose presence helped to break our fastin'
And graced the board with cheery zest,
Herself the brightest and the best.

At the October meeting, no quorum and no papers.

November meeting, no quorum and no paper, but many clinical cases of interest were presented and discussed.

The December meeting was held in the Capital Hotel parlor, with retiring President Demaree as the host of the banquet tendered the society.

The essayist was Dr. Flora W. Mastin,

whose subject was "Sanitation or Preventive Medicine." She presented a most commendable paper which was very much enjoyed by the society. It was full of new points and replete with allusions to authorities both modern and ancient, and showed careful study of the subject in its preparation.

The following officers were elected and installed for the ensuing year: President, Dr. Warren Montfort, Wood Lake; Vice President, Dr. L. T. Minnish, Harveyland; Secretary-Treasurer, Dr. Emmett Allen, Bridgeport; Delegate to State Association, Dr. J. R. Ely, Frankfort; Rereree, Dr. U. V. Williams, Frankfort.

The society then adjourned.

U. V. WILLIAMS, Secretary.

Married.—On November 2nd, 1904, Dr. John G. South to Miss Christine Duncan Bradley, daughter of ex-Governor W. O. Bradley. At home now at the Capital Hotel after an extended bridal tour embracing the eastern cities; thence to the St. Louis Exposition, via. Chicago; extended to California, via. Yellowstone Park and Pacific slope to San Francisco, Los Angeles. Home via. Hot Springs and Little Rock, Arkansas.

Now he promises to be good and go to work. The Franklin County Medical Society extends to the happy couple hearty congratulations. Long life to the groom and *patients* for life work, and for the bride, *patience* with whatever shortcomings he may have, if any(?)

By order of the society.

U. V. WILLIAMS, Secretary.

(It is delightful to observe that time does not alter nor custom stale the flow of spirits of the genial secretary of the Franklin County Medical Society. The poetic Muse is supposed to flourish in the neighborhood of green fields and rippling brooks. The recent unprecedented drouth in Central Kentucky leads us to suppose that the supply of "Kentucky Dew" in Franklin county has not been exhausted.—Editor.)

* * * * *

The *Hardin County* and *Muldraugh Hill Medical Societies* met jointly at Elizabethtown, Thursday, December 8th, 1904. The attendance was good and a great deal of interest manifested. The Hardin County Society elected the following officers for 1905: President, Dr. J. C. Mobley, of Elizabethtown; Vice President, Dr. J. D. Howell, of Vine Grove; Secretary-Treasurer, Dr. J. M. English, of Elizabethtown; Delegate to State Association, Dr. D. C. Bowen, of Nolin.

H. R. NUSZ, Secretary.

The *Henry County Medical Society* met at New Castle, Monday, November 28, 1904, Drs. J. C. Cassity, W. T. Cobin, O. P. Chapman, Louis Coblin, W. L. Nuttall, A. P. Dowden, R. W. Porter, C. R. Martin, A. Wainscott, F. J. Yeager, C. R. Johnson and Dr. August Schachner, of Louisville, present.

Dr. Schachner addressed the society on "Radical Cure of Inguinal Hernia" and then by request of the society, made a talk on "Prostatectomy."

Dr. Johnson read a paper on "Dysentery," which was discussed by all present.

The society then unanimously voted thanks to Dr. Schachner and extended him a perpetual invitation to meet with it in future.

JOHN P. NUTTALL, Secretary.

* * * * *

The *McCracken County Medical Society* met in regular bi-monthly meeting at Paducah, Ky., Dec. 7th, 1904.

Dr. W. Johnson Bass read an interesting paper on "Prolapse of Rectum in Children." The paper elicited a hearty discussion.

The subject of "Maternal Impressions" was incidentally mentioned during the evening and evoked a prolonged and animated discussion.

The annual election of officers was held and the following physicians were elected to serve the ensuing year. President, Dr. R. C. Gore, Lone Oak, Ky.; Vice President, Dr. W. Johnson Bass, Paducah, Ky., Secretary, Dr. J. T. Reddick, Paducah, Ky., and Treasurer, Dr. Delia Caldwell, Paducah, Ky.

A committee on program composed of Drs. Reddick, Rivers and Stewart was appointed to arrange for a good winter's society work.

We hope that our county society will get a little Brown Sequard's Elixir of Life injected into it, or something else that will give it a little more vigor.

J. T. REDDICK, Secretary.

* * * * *

The *Muhlenberg County Medical Society* met in Central City, Dec. 14th, 1904, and the following officers were elected:

President, Dr. J. T. Woodburn, Central City, Ky.; Vice President, Dr. C. F. O'Bryan, Greenville; Secretary-Treasurer, Dr. S. T. Taylor, Central City; Delegate, Dr. J. W. Koontz, Greenville.

S. T. TAYLOR, Secretary.

* * * * *

A called meeting of the *Nelson County Medical Society*, was held in the office of Dr. B. E. Gore, on December 12th, 1904.

The following members were present: Drs. J. E. Smith, B. E. Gore, S. C. Muir, S. A.

Cox, T. B. Nicholls, H. E. McKay and Hugh D. Rodman.

On motion the President appointed Drs. Rodman, Gore and McKay a committee to draft resolutions on the death of Dr. A. G. Blincoe. Said committee reported the following, which was unanimously adopted:

Whereas, by the dispensation of Almighty God, our co-worker in the cause of humanity, and our honored and esteemed brother in the medical profession, Dr. Aloysius Gonzaga Blincoe has been called in the midst of an honest and useful life to Eternity; therefore, be it resolved by the medical profession of Nelson county, in society assembled,

1. That, in the death of Dr. Blincoe, the medical profession of Nelson county has lost one of its ablest workers, the community a diligent and faithful servant and this society a useful member.

2. That, we extend to his grief-stricken family, in this the saddest hour of their lives, our sincere sympathy.

3. That a copy of this proceeding be given his bereaved family; and that a memorial page be set apart in our Record Book, and these resolutions be spread thereon; that the Nelson county papers be asked to publish the same; and that we attend his funeral in a body.

HUGH D. RODMAN,
B. E. GORE,
H. E. MCKAY,

Committee.

J. E. SMITH, President.

HUGH D. RODMAN, Secretary.

* * * * *

The *Oldham County Medical Society* met with Dr. Lew G. Wallace, at Beard, Ky., November 29th, 1904.

The following members were present: Drs. John H. Spear, R. B. Pryor, of Brownsborough; R. B. Cassady, of Lagrange; J. H. Freeman, Geo. B. Boone, Lew G. Wallace, of Beard; Drs. Mason, of Middletown, and Murdock, of Skylight, were guests of the society.

The meeting was called to order by President John H. Spear, the minutes of the last meeting were read and approved.

Reports on special cases were called for and Dr. Wallace reported a case of criminal abortion in which he and Dr. Freeman had been called. The subject was discussed at length by Drs. Freeman, Boone and Spear.

Dr. Freeman read a paper entitled, "The Comparison of the Fees of the County Practitioner with the Fees in the Blue Book of the Mississippi Valley Association."

Dr. Murdock spoke at length on typhoid fever, giving his own experience in the use of

certain drugs in the treatment of this dreadful disease.

Dr. Cassady, in a talk, urged faithful attendance at the stated meetings of the society.

The following resolutions were adopted:

Resolved, That the members of the *Oldham County Medical Society* refuse to visit patients who are in the habit of calling doctors while they have unpaid bills for services of other doctors, thus taking advantage of doctors in getting services without the idea of paying for it.

Resolved, That we as a society condemn unqualifiedly the practice of criminal abortion, as we notice it is being practiced so much and bringing about the untimely death of so many women. Further that we do not in any way countenance the fellowship of physicians who practice this nefarious work. Nor do we desire the practice following these operations. We regard it as a great crime, difficult to treat. Many other reasons can be given for this expressed condemnation.

Resolved, That no member of the *Oldham County Medical Society* shall attend an obstetrical case for less than \$15.00, and that the secretary shall notify the absent members of the action of the society.

The following named doctors were elected to fill the offices for the ensuing year: Dr. John H. Spear, President; Dr. R. B. Cassady, Vice President; Dr. R. B. Pryor, Secretary and Treasurer.

A vote of thanks was tendered Dr. and Mrs. Wallace for their entertainment. The society meets with Dr. Boone at Beard, Ky., the second Thursday in January.

R. B. PRYOR, M. D., Secretary.

* * * * *

The *Todd County Medical Society* met December 7, 1904, at Elkton, this being the time for its regular meeting. The society adopted the suggestion made by the State Secretary in regard to making out a program for the entire year by the Committee on Arrangements, also place of meeting. All communications from the State Secretary were read and considered. This being the annual business meeting, no papers were read.

The election resulted as follows: Dr. R. V. Ferguson, of Hadensville, was unanimously elected president; Dr. W. H. Forgy, of Fairview, Vice President; Dr. T. E. Bruce, Elkton, Secretary-Treasurer; Dr. Karl Russell, Allensville, was elected censor to succeed Dr. B. D. Taylor, whose time had expired; Dr. J. L. Barker, Pembroke, was elected delegate to the State Convention in 1905. The meeting adjourned at 3 p. m.

T. E. BRUCE, Secretary.

The *Trimble County Medical Society* held its regular meeting in Dr. C. P. Harwood's office in Milton, Ky., on Monday, December 12th, 1904, Dr. C. P. Harwood presiding. No papers were read. Dr. Harwood reported a case of typhoid fever with hemorrhage, successfully treated with adrenalin chloride.

The annual election of officers for the ensuing year (1905) resulted as follows: President, Dr. S. K. Fisher, Bedford; Vice President, Dr. Wm. McMahan, Bedford; Secretary-Treasurer, Dr. L. G. Contri, Winona; Censor for two years, Dr. C. P. Harwood, Milton; Censor for one year, Dr. B. O. Rand, Winona; Delegate to Kentucky State Medical Association, Dr. L. G. Contri, Winona.

The society adjourned to meet at Bedford, Ky., on Monday, January 15, 1905, when the newly elected president, Dr. L. K. Fisher, in taking the chair will undoubtedly deliver a brilliant inaugural address. Papers also will be read by Drs. McMahan, Harwood and Rand.

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DR. J. B. LYEN,
Salvisa, Ky.

ORGANIZATION OF THE KENTUCKY VETERINARY MEDICAL ASSO- CIATION.

The following gentlemen responded to a call for a meeting of the State veterinarians, held at the Galt House, Thursday, Nov. 24:

Dr. F. T. Eisenman, Louisville; Dr. M. M. Leach, Lexington; Dr. Jno. E. Gray, Bowling Green; Dr. D. A. Piatt, Lexington; Dr. L. M. Land, Lexington; Dr. M. A. Purdy, Shelbyville; Dr. J. W. Jameson, Paris; Dr. J. T. Chawk, Louisville; Dr. J. S. Ellis, Eminence; Dr. H. Kleiser, Eminence; Dr. R. W. Deats, Bardstown; Dr. I. M. Hendrick, Owensboro; Dr. B. H. Bueter, Louisville; Dr. A. Mosching, Louisville.

The organization was effected under the name of the Kentucky Veterinary Medical Association.

The names of Dr. J. W. Rollings, Lexington; Dr. A. D. Eisenman, Louisville; Dr. Ed Hagyard, Lexington, and Dr. John Hagyard, Lexington were presented to the meeting, and they were also elected as charter members.

The object of the Association as stated by the Constitution, which was adopted, is as follows:

To federate and bring into one compact organization the entire profession of the State

of Kentucky; to extend knowledge and advance veterinary science; to elevate the standard of veterinary education, and to secure the enactment and enforcement of just veterinary laws and to promote friendly intercourse among veterinarians; to guard and foster the material interests of its members, and to protect them against imposition; to enlighten and direct public opinion in regard to the great problems of veterinary medicine, so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and curing of disease, and in prolonging and adding comfort to the life of domesticated animals; to protect the material interests of the veterinary profession and to present to the world its achievements.

The following officers were elected:

Dr. F. T. Eisenman, of Louisville, President; Dr. M. M. Leach, of Lexington, Vice President; Dr. John E. Gray, of Bowling Green, Second Vice President; Dr. D. A. Piatt, of Lexington, Secretary and Treasurer, Executive Committee, Dr. L. M. Land, Lexington; Dr. M. A. Purdy, Shelbyville, and Dr. J. W. Jameson, Paris.

On the afternoon of Thursday several of the visiting doctors were shown two cows which had been previously tested by Dr. Purdy, of Shelbyville, and showed reaction to tuberculin. These cows were in fine condition, and judging from external appearances there was no evidence that they were infected with tuberculosis. The lungs in both cows were highly infected, showing large tubercles, some of which were undergoing caseation. One of the bronchial glands measured 6 inches by 3, and weighed about two pounds; in health these glands are the size of a chestnut.

It was the sense of the meeting that at least 20 per cent of the cows now supplying milk to the various cities in the State of Kentucky are tuberculous, and to impress this fact upon the public the following resolution was adopted:

Whereas, the State Veterinary Medical Association of Kentucky, now convened, has determined, after taking the testimony of competent and qualified veterinarians, that at least 20 per cent. of the cows now supplying milk to the various cities in the State are tubercular, therefore, be it

Resolved, That we hereby suggest that the Board of Health in all towns and cities throughout the State, on and after January 1, 1905, take stringent measures to stamp out the dread disease and require of all dairymen the testing semi-annually of all dairy cows with tuberculin by a competent and regularly qualified veterinarian.

After electing the above officers the meet-

ing adjourned until the second Tuesday in December when it will meet in Lexington. The following papers will be read at that meeting:

"Sterility of Mare," Dr. Leach; "Choking," Dr. Gray; "Tetanus," Dr. Purdy; "Glanders" Dr. F. T. Eisenman; "Tuberculosis," Dr. L. M. Land; "Parturient Paresis," Dr. R. W. Deats.

* * * * *

Dr. F. H. Clarke, President of the Kentucky State Medical Association, announces the following committee appointments:

Scientific Work.—J. Garland Sherrill, Louisville; P. F. Barbour, Louisville.

Public Policy and Legislation.—George P. Sprague, Lexington, Ky., Chairman; Ben. L. Bruner, Hardyville, Ky.; W. W. Richmond, Clinton, Ky.

Member Auxiliary Committee on Medical Legislation, A. M. A.—Steele Bailey, Stanford, Ky.

AN OLD OFFENDER FINED.

Dr. G. W. Waddle was tried before a jury in the Circuit Court at Elizabethtown, on December 12, and fined one hundred dollars for giving assistance to a small-pox patient named Banta in an unsuccessful attempt to escape from a quarantine imposed by the County Board of Health. The man left his residence in the darkness and, upon tickets procured by Waddle, the pair boarded a night passenger train but were recognized by a local officer and promptly arrested. Banta had already been fined upon several counts and the proof was conclusive as to the guilt and recklessness of both men.

Waddle is an old offender against the medical law, having appealed unsuccessfully to Governor Bradley from a decision of the State Board of Health refusing him a certificate to practice, and Dr. McCormack was present at the trial as a witness.

Report of Examination for License to Practice Medicine IN THE STATE OF KENTUCKY.

Held at Louisville, October 3, 1904. Number of subjects examined in, 10; Total number of questions, 100. Percentage required to pass, 70 per cent. and not less than 60 per cent. in any one subject. Written examination. Total number examined, 12. Number passed, 4. Number failed, 8.

Name or number of Applicant.	School of Practice.	College.	Year Grad.	Per Cent.	Remarks.
1.	R.	Baltimore Medical College.	'03.	60	Unsatisfactory.
*2.	R.	Hospital College of Medicine,	'04.		Withdrew.
3.	O.	American School of Osteopathy.	'04.	58	Unsatisfactory.
†4.	R.	Louisville Medical College,	'03.		Withdrew.
5.	R.	Western Reserve Medical College, (Ohio)	'01.	92	Satisfactory.
6.	R.	University of Maryland,	'04.	65	Unsatisfactory.
7.	H.	Cleveland Homeopathic Medical College,	'04.	85	Satisfactory.
8.	R.	Louisville Hospital Medical College,	'00.	49	Unsatisfactory.
9.	R.	Baltimore Medical College,	'04.	75	Satisfactory.
10.	Mag.	Chicago School of Psychology.	'99.	29	Unsatisfactory.
11.	R.	Miami Medical College,	'04.	80	Satisfactory.
12.	R.	Knoxville Medical College,	'01.	48	Unsatisfactory.

*2. Only took two branches and withdrew.

†4. Withdrew when presented with first set of questions.

[Signed] J. N. McCORMACK,
Secretary Kentucky State Board of Health.

Dated December 10, 1904.

The following are the questions asked:

ANATOMY.

1. Give the origin, course and distribution of the pneumogastric nerve.
2. What are the names of the groups of the spinal nerves, and the number in each group?
3. Give a brief general description of the sympathetic nervous system.
4. Name the cranial nerves, and the foramina of exit of each.
5. Describe the diaphragm, giving nerve and blood supply.

6. Describe and give the elements of a ginglymus joint.

7. Name the various kinds of bones, giving an example of each.

8. What muscles have attachment to the upper extremity of the ulna?

9. Give the names and relations of the bones and blood vessels found on cross section of the middle fore-arm.

10. Describe the urinary bladder, and give its relations.

PHYSIOLOGY.

1. (a) What is physiology? (b) What is disease from the stand-point of the physiologist?

2. Differentiate between the cerebro-spinal and sympathetic nerves both as to structure and function.

3. Give a description of and explain the functions of the vaso-motor nervous system.

4. Describe and give the functions of the pneumo-gastric nerve.

5. Explain the changes in the blood produced by respiration.

6. What forces are involved in the circulation of the blood?

7. What are the functions of the pancreas?

8. Give the constituents and functions of bile.

9. How is the temperature of the body maintained?

10. Name the chemical constituents of the human body, giving the proportions of the four principal ones.

CHEMISTRY.

1. Define an element and a compound. Give examples of each with their symbols.

2. What is starch? How is it obtained? Mention a test by which starch can be recognized.

3. What is the name of the union of two or more substances by chemical attraction or affinity?

4. What is dextrine. How is dextrine converted into grape-sugar?

5. Name and describe an allotropic form of oxygen.

6. What is the principal atom having linking functions?

7. Define analysis and synthesis. How can they be applied to water?

8. Describe three tests for sugar in urine, two for albumen and one for bile.

9. In order of their importance, mention as many as you can of the chemical elements entering into the composition of the human body.

10. Give the chemical formula and some of the physical properties and sources of carbon dioxide.

PATHOLOGY.

1. What is meant by immunity, and how is it produced?

2. What is the pathology of croupous pneumonia?

3. What are the pathological changes in the lungs during the stages of acute lobar pneumonia, in which the result is favorable?

4. Mention the pathologic conditions in dyspepsia.

5. What do you understand by the terms sterilization, disinfection, culture media, toxins and anti-toxins?

HISTOLOGY.

1. Define histology.

2. Describe the histology of an artery.

3. Describe the histology of a vein.

4. Describe the histology of the skin.

5. Describe the histology of a pulmonary air cell.

BACTERIOLOGY.

1. What are bacteria? Name the more common pathogenic forms.

2. Describe the bacillus of diphtheria.

3. Describe the method you would use to grow an anerobic bacteria.

4. How would you proceed to find the number of bacteria, per cubic centimeter, in water?

5. How would you demonstrate the presence of anthrax bacilli in a kidney of an animal which had died of general anthrax infection?

HYGIENE AND STATE MEDICINE.

1. Give essentials of a pure water supply.

2. How would you disinfect a room after a contagious disease?

3. Give the precautions to be used in managing a case of typhoid fever to prevent a spread of the disease.

4. How would you manage a case of diphtheria to prevent its spread?

5. Give the diagnosis and public health management of small pox.

OPHTHALMOLOGY.

1. Define the range of power of accommodation.

2. Give etiology and symptoms of iritis.

3. Give causes and symptoms of interstitial keratitis.

4. Give causes and symptoms of purulent inflammation of the vitreous.

5. Give pathology and diagnosis of glaucoma.

OTOLOGY.

1. Give Politzer's method for effecting the permeability of the Eustachian tube.

2. Give diagnosis and prognosis of acute inflammation of the middle ear.

3. Give etiology and diagnosis of hyperemia of the labyrinth.

4. What cerebral diseases are associated with disturbances of hearing?

SURGERY.

1. Define and give causes of septic infection.

2. Give differential diagnosis between acute infectious osteomyelitis and tubercu-

lar osteomyelitis, involving one of the long bones.

3. Name the differential clinical and pathological points between a malignant and a benign neoplasm.

4. How would you treat a fracture of the neck of the femur in a woman seventy years of age?

5. Give the differential diagnosis between a stone in the kidney and one in the urinary bladder.

6. Give the process of repair in a bone.

7. Give the differential diagnosis between (a) concussion of the brain, (b) fracture of the base of the skull, and (c) rupture of the middle meningeal artery.

8. Give classification and treatment of hemorrhoids.

9. What is hernia? Give diagnosis and treatment of a strangulated inguinal hernia.

10. What are the surgical landmarks of the elbow joint, and how would their position aid you in making a diagnosis between a fracture of the upper end of the radius and a posterior dislocation of the ulna?

OBSTETRICS.

1. How would you diagnose pregnancy before the fourth month? After the fifth month?

2. How would you manage a case of shoulder presentation after labor has begun?

3. Etiology, prognosis and symptoms of puerperal fever.

4. How would you proceed in case of post-partum hemorrhage?

5. What would you do if the head was arrested in the inferior strait with face presentation?

6. What is placenta-previa? Give treatment.

7. Give definition of eclampsia.

8. What are the unfavorable signs in delayed labor, and what the indications for the use of the forceps?

9. What would you do if you found an arm presenting?

10. What are the most serious complications met with in breech presentation? How would you treat a case?

GYNECOLOGY.

1. Describe the uterus, giving blood and nerve supply.

2. Give in detail the method you would use in making an examination of the pelvic organs.

3. What is the differential diagnosis between salpingitis, ovaritis and appendicitis?

4. How would you diagnose an ovarian tumor?

5. Give the causes and symptoms of dysmenorrhea.

6. What are the general symptoms that indicate disease of the pelvic organs?

7. What are the most frequent etiological factors in pelvic peritonitis?

8. How would you diagnose an ovarian

PHYSICAL DIAGNOSIS.

1. What are the methods of examination of the chest? What facts can be discovered by this examination?

2. What are the physical signs of pneumonia?

3. Give the position of the heart, with the abnormal sounds and the position of each?

4. Give the location of the lungs, giving the various deformities of the chest produced by disease?

5. What are the physical signs of pulmonary tuberculosis, independent of the signs given by analysis of the sputum?

6. Give the location of the colon?

7. Give the location of the heart, valves topographically?

8. What are the signs of ascites?

9. Give the physical signs of pleuritic effusion?

tumor from pregnancy?

9. What are the symptoms of laceration of the cervix?

10. What are the signs and symptoms of extra-uterine gestation?

MEDICAL JURISPRUDENCE, AND MENTAL AND VERVOUS DISEASES.

1. Give a concise definition of medical jurisprudence.

2. Differentiate uremic coma from that following a brain lesion.

3. An infant, evidently of recent birth, is found dead. A woman is produced who is said to be its mother. In case of an examination, what proof would you expect to find in the alleged mother's condition?

4. What is meant by the term malpractice?

5. The body of a dead infant is found and the authorities call upon you to determine if the infant has breathed. How would you go about ascertaining this fact?

6. Concisely differentiate between variola and varicella. Between variola and impetigo contagiosa.

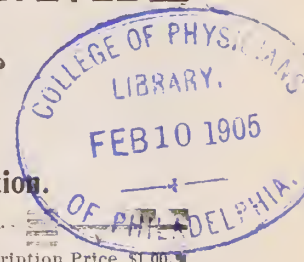
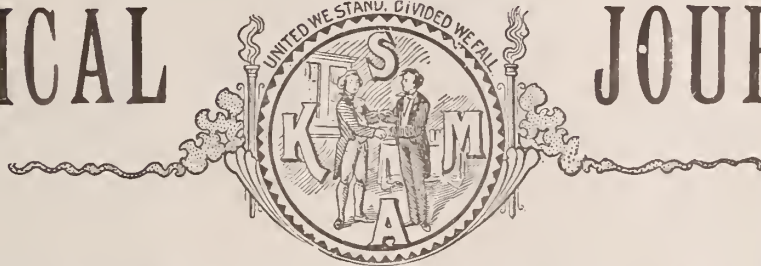
7. Give the main points of difference between the male and female skeleton.

8. In the event chemical examination of the contents of the stomach had been determined upon, how would you secure the contents that they might be received by the chemist in proper condition?

9. Define insanity, name varieties.

10. Define idiocy and imbecility.

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A. M. A. Principles of Ethics:

"It is equally derogatory to professional character for physicians to dispense or promote the use of secret remedies."

had an old bald-headed, bowlegged woman that he would bring out every three or four days. Sometimes she would have endometritis, sometimes puerperal septicemia, and the next time prolapsus of the rectum. The graduating class didn't seem to want to examine her, and I made my examinations at a private institution on one of the back streets; but the lady that I went to see didn't seem to be in labor during any of my visits, and the result was that my clinical experience was curtailed, so to speak. But to return to my text. Like old Columbus in exploring new regions I again made an examination of ten or fifteen minutes' duration and finally came to the conclusion that if the child wasn't born at all it wouldn't be anybody's fault, as we had everything requisite for a first class delivery.

In the meantime the father of the offspring, who had never become reconciled to existing conditions, got mad and left the house. His wife kept calling, "Oh, Darling! Come in and see me." He poked his head in at the window and said, "I don't want to see ye. I don't want to see ye." I said, "I will bring him;" so I got up and wiped my hands on the negro woman's apron, took a chew of tobacco and went out to reason with him. I told him his wife was liable to die at any time, and if she died he would be sorry he didn't stay with her to the last, and if she got well they could fight it out afterwards. "I don't want to see her; I don't want to see her." I said, "I'll be darned if you don't." So I grabbed him by the back of the neck and the seat of the pants, and shoved him into the house with considerable force.

And then, while seriously considering the advisability of making another examination, the woman gave a soul-piercing scream; the little fellow thought she was about gone, he repented himself and fell prostrate on her neck. This proved to be too much for the bed: the frail structure collapsed and they all came down in a pile together, and it was hard to tell who came out first, the white man or the darkey.

Well, the negro woman and I, with the help of the patient, finally "brought order out of chaos," and then I concluded to take a recess. I leaned against the wall in a rickety chair, the bed bugs grinning at me on either side, meditating on the beauties of nature and the disadvantages of mind over matter, and being considerably wearied, I fell fast asleep and dreamed. In my dreams my mind reverted to my schoolboy days. I could see Prof. Weaver standing before us, drilling us in mental arithmetic. The problem he gave us was: "If a baby and a half is born in two

minutes and a half, how many babies are born in an hour and a half?" As quick as a wink I answered, "Six and one-fourth." I always was good in mental arithmetic. In my dreams I could see my old friend, Dr. Yocom, and myself, as we lay on our cotton mattresses in a cheap boarding house, gazing at the stars through the holes in the roof, our minds filled with lofty ambitions, dreaming of the happy time when our names should be encircled by a halo of glory, with such men as Jenner, Flint, Gross, and other old saw-bones. Suddenly I heard a squall like a new birth. I jumped up and saw the baby in the negro woman's lap already dressed.

[The author of this paper died suddenly, after a few days' illness, a week after reading this paper before the Kentucky Midland Society. He at that time was apparently in the best of health and spirits, was the life of the meeting, and seemed as far away from the great beyond as any man of his years. It seems almost incongruous to publish a paper in so light a vein after such a tragic termination to Dr. Jennings's life.—Editor.]

PROXIMITY AND POSITION OF WEAPON IN GUNSHOT WOUNDS AS ESTIMATED BY EXTER- NAL APPEARANCES OF WOUND AT POINT OF ENTRANCE.*

By J. K. W. PIPER, M. D., RUSSELLVILLE, KY.

A study of the above question is of most importance from the medico-legal standpoint, especially in determining as to a case of suicide or homicide. It is impossible to even approximate the distance a ball has traveled by the amount of work or damage it has done after striking a human target, except in case the exact range of the gun is known, and the ball has almost spent its force before striking the target, for the ball may have become battered or distorted in shape by coming in contact with some article of clothing, such as a button or buckle before entering, or by striking a bone soon after entering, which would affect its progress or course to a degree that could not be estimated. For the same reason it is impossible to make a proper estimate by taking into consideration the weight and size of the ball, the charge of powder, and the damage done, for no two cases are exactly alike. If, however, there are found about the wound of entrance marks caused by the burn-

* Read before Southern Kentucky Medical Association, October 26, 1904.

ing powder, or gases of combustion, by properly conducted experiments we may be able to estimate almost to an exactness the position



FIG. 1.

Markings from 38-calibre S. & W. Special Revolver, black powder, at 4 inches. Brand distinctly seen above bullet hole, and effects of firing of paper and blackening all round. Sight turned up at instant of discharge.

and distance of the weapon from the target when fired; for when such marks are found, the distance must have been considerable.

A fair estimate may sometimes be made in shotgun wounds by a study of the area over which the wounds are found. In most cases the effect of burning will be found about the wound if the charge has been delivered from such a distance that it has entered as one mass, but I have known cases where shot has been wrapped in heavy paper or cloth and has by this means been held together for quite a distance. In two cases in a breech-loader, where the paper shell had been cut around just in front of the powder charge for the purpose, the front end of the shell, the wads, and the full charge of shot entered as a single ball after having traveled quite a distance, in one case thirty-five yards.

Especially in wounds caused by single ball weapons, more especially the pistol, the two most important factors in estimating distance and position are: first, tattooing, or marks caused by grains of powder unburnt, partially burnt or in process of burning, blown out with the ball; and second, the brand, burn or singeing, caused by the gases of combustion, or blaze from the burning powder, which when found prove that the range must have been short, or within a certain distance.

Before a proper estimate of proximity can be made, even when the tattooing and brand are found, it is necessary to learn as

much as possible about the gun used as to calibre and length of barrel, make and condition when fired, and as nearly as possible the kind of powder used.

As a rule the better made the weapon, and the longer the barrel, the further will it throw the unburnt powder grains; the larger the caliber, the more of them will it throw; and the coarser the powder grains, the further will they fly, hence the difference in the amount of marking by different guns at the same distance. A dirty gun will cause more powder markings at a given distance than a similar clean gun, and a revolver in which the cylinder fits tight against the barrel, so as to prevent a marked escape of gas, will shoot harder, and throw powder harder and to a greater distance than a similar weapon whose cylinder does not fit tightly against the barrel. A gun that is too heavily charged may cause markings at a greater distance than if properly loaded. Again, the better the powder, as a rule, the more thoroughly it burns before leaving the barrel; hence the less will be the tattooing by the unburnt, or partially burnt grains. The modern smokeless, or semi-smokeless powder causes much less marking at as great a distance. Ordinarily the nearer the target is approached, the more distinct will be the brand and tattooing, at least to within an inch or less, after which they will be mingled with the blackening about the edge of the wound in one solid



FIG. 2.

Same weapon and powder as Fig. 1. Fired at 6 inches, with sight turned down. Brand seen as distinct from powder tattooing in right line (below). Effect of firing still seen

mark, as in a case I saw a few days since in which the wounded party had grasped the pistol in such a manner that his finger was

over the muzzle at the instant of discharge, the ball going through the finger, and apparently most of the powder that would otherwise have marked his hand following it.

There were no separate powder grain marks about the hole, although the hand was superficially blackened by the smoke.

The area over which the powder marks, or tattooing, is seen increases in extent as the distance increases to the point at which it can not be seen, and likewise the brand, only in a lesser degree; but while the tattooing is seen all around the bullet hole, more especially above, the brand beyond the distance of two inches is only seen above, or in the direction from the bullet hole that the sight is from the muzzle at the instant of firing. Its distance from the bullet hole increases up to the point at which it becomes too faint to be seen. While the tattooing and brand are seen together, and must be so studied, they are produced by different causes, and can usually be easily distinguished, especially when seen on a light colored skin, or on any other light colored substance. The brand is usually a superficial burn or scorch on skin, and if life continues, will soon disappear; but not so with tattooing, when the powder grains penetrate below the surface. For while those grains which lodged superficially may come off with the scales of the skin, the deeper grains remain permanently, though they may become paler in time.

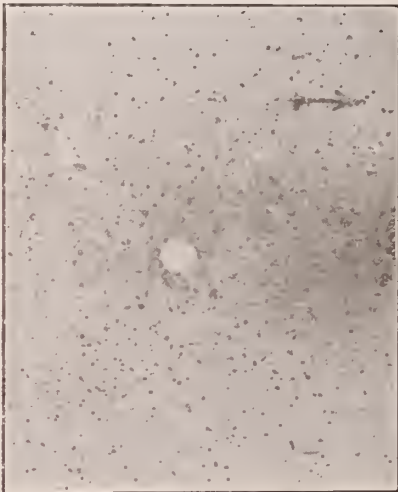


FIG. 3.

Same weapon and powder as Figs. 1 and 2, fired at 10 inches, sight turned to right. Brand very pronounced.

The position of the brand, and of the greater part of the tattooing and superficial powder marks in regard to the bullet wound,

is explained by Fish, of Massachusetts, and others, as due to the kick of the weapon, or the bouncing upward of the muzzle as it is fired,

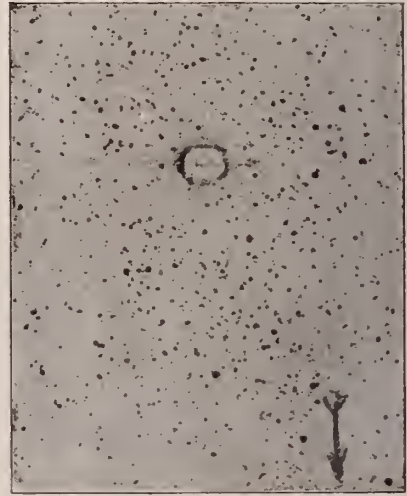


FIG. 4.

Same weapon and powder as Fig. 1. Fired at 14 inches, sight turned down. Brand still fairly seen near arrow.

the support of the barrel being below the center in the drop of the handle. The bullet escaping first, the greater number of the unburnt powder grains, and the blaze of the burning gases, assume a new direction, and strike above the bullet hole if the sight is upright, or to the left, right or below, if the sight has been in either of these directions at the instant of firing. This also explains why the farther the weapon is from the target, the farther from the bullet hole will be the brand and greater part of the powder markings. It has also been shown that if the weapon be confined in a vise so that the muzzle can not fly upward when fired, the markings will be equally distributed about the bullet hole.

As bullet wounds vary in size from those produced by twenty-two to fifty caliber bullets, it is best before making a positive statement in a case to experiment with the same weapon, or with a weapon and ammunition as similar as possible to that with which the wound was caused, for comparison.

With the fixed ammunition in use almost exclusively to-day, loaded as it is for the best ballistic results, experiments are much more easily made and with greater satisfaction than when the old muzzle loader was in use. As the most popular pistols in use at the present time are of thirty-two and thirty-eight caliber, I have experimented mostly with these sizes, and with some definite results.

With the thirty-two caliber Smith & Wesson revolver, three inch barrel, shooting the

ordinary Smith & Wesson cartridge, the brand showed distinctly in the sight line of the bullet hole on fresh sheep skin from which the

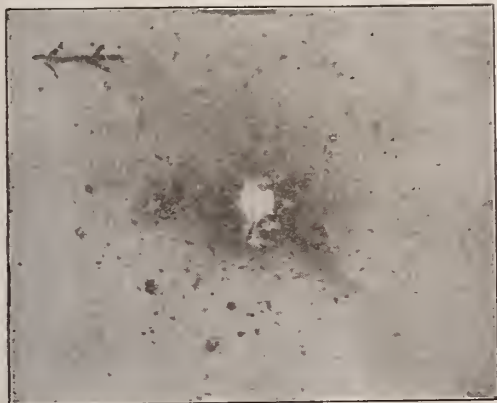


FIG. 5.

Same weapon as used in Fig. 1, but using smokeless powder at 4 inches, sight turned to left. Brand distinctly seen to left of bullet hole.

wool had been removed, and on blotting paper, or cotton flannel, at two inches; very distinctly up to eight or ten inches, and perceptibly slightly farther, when shooting at a facing or point blank surface. The powder markings could be seen to about three feet, but no firing of cotton flannel or paper occurred beyond four inches.

With four-inch barrel, shooting a long Smith & Wesson thirty-two caliber cartridge, black powder, the brand showed distinctly at ten or twelve inches, powder marks to about four feet, and firing of goods to about six inches. With a thirty-eight special Smith & Wesson, five-inch barrel, shooting long cart-

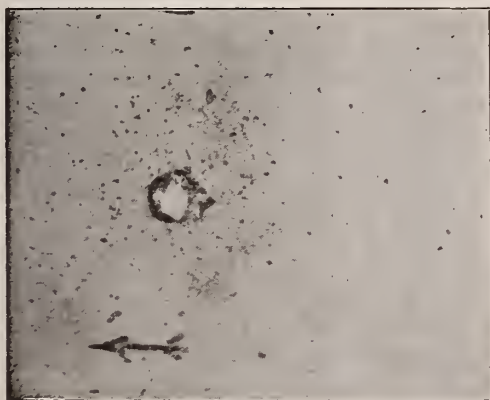


FIG. 6.

Same weapon and powder as Fig. 4. Firing at 6 inches. No brand seen, only slight grain and smoke markings.

ridge, black powder, brand can be seen to fourteen or sixteen inches, powder marks to five feet, and firing of goods six inches; but

with smokeless powder cartridges very little branding is seen beyond four inches, and practically no tattooing beyond the same distance, unless the shell is overcharged, although a slate-colored stain, resulting from the gases, is seen, disappearing at six inches. Except at very close range, the brand can not be seen as well on skin as on a white target.

By a careful study of the targets on blotting paper and sheep skin here shown, it will be seen that the brands are separate and distinct from the powder marks and always found in the sight line of the bullet hole.

EXPLANATION OF TARGETS.*

These targets have all been made by a 38 caliber Smith & Wesson revolver, the upper row by black powder shells, and reading from left to right were at two, four, six, ten, fourteen and eighteen inches, and the brand, as distinct from the tattooing, is very plainly illustrated in the sight line from the bullet hole, the arrow indicating the direction of the sight from the muzzle at the instant of firing. The lower row was produced by the same weapon, shooting smokeless powder cartridges. From left to right numbers 1, 2, 3, and 4 were at two, four, six and eight inches, and very little brand or powder marking can be seen beyond six inches. Nos. 5 and 6, lower row, were at six and ten inches, the markings being caused by unignited powder grains from overcharged cartridges.

* NOTE.—Owing to lack of space only six representative targets are reproduced.

CLINICAL REPORT OF A CASE OF TYPHOID FEVER, WITH SEQUELAE.*

By JOHN H. BLACKBURN, M. D., BOWLING GREEN, KY.

J. F., white, male, age 11 years.

Previous History: Had always been a vigorous, healthy boy. Three weeks before illness began there was loss of appetite, general malaise, members of family remarking on the loss of flesh; bowels required purgatives. During week preceding onset, there was nose bleed at some time each day.

Present illness began December 15th, 1903, at 10:00 p. m., patient being aroused from sleep, complained of headache and nausea, followed in a short time by violent vomiting, at first contents of the stomach, later large quantities of bile.

Patient was seen the following day when he had temperature 103 F; pulse full, bound-

* Reported to Warren County Medical Society, December, 1904.

ing, 100; persistent nausea and vomiting; bowels constipated; urine scanty, highly colored; tenderness in epigastrium.

During first week temperature in afternoon varied from 103 degrees to 104.6 degrees F., having a diurnal variation of one to one and a half degrees. Pulse became more rapid, 110 to 120, and later dichrotic. On fifth day, urine gave positive reaction to Ehrlich's diazo test.

Enlargement of spleen could be detected by percussion on sixth day and palpation on eighth day. Nausea and vomiting persisted for 6 days and constipation was followed by diarrhoea, three to six discharges a day, containing at first large quantities of bile.

On eighth day there were found a few rose-colored spots over upper abdomen, appearing during second and third weeks in four crops.

During second week there was less tenderness in epigastrium but more marked in the right iliac region with gurgling. Temperature now remained 103.5 to 105, except when reduced by sponge bath or rectal injection of cold water.

Bowels now became constipated and remained so during illness, requiring enema.

On the tenth day developed low, muttering delirium and slight carphologia, which was later followed by more active delirium, laughing or crying.

At the end of third week there was greater daily range of temperature, and at the end of the fourth week the afternoon temperature was normal.

There was a slight return of appetite, delirium disappeared, general appearance somewhat improved and patient seemed to be convalescent.

On the sixth day of normal temperature, beginning the sixth week, patient began to complain of pain in left ear, and on examination found an involvement of the left parotid gland which soon became swollen, red, tender and painful on pressure. Attending this was rise of temperature to 103 degrees. Pain and tenderness were relieved to some extent by local applications, 25 per cent guaiacol, but temperature remained above normal for twelve days. During this time there appeared in succession six lesions of the scalp, located in the temporal and parietal regions, and occupying the position, pathologically, of tubercles, nodular enlargement, slight tenderness on pressure, not movable under skin or over subcutaneous structures. From first to last these lesions were present for two weeks, showing no tendency to suppuration.

During this time patient lay in a half-conscious state most of the time, but could be

aroused at times. As he began to show signs of exhaustion his diet was increased, the patient taking any food given him. There were, however, intervals of active delirium, crying or laughing for half an hour, which could not be controlled.

After seven days of normal temperature, beginning of the ninth week, with very slight change in general condition, patient began to run an intermittent temperature—up to 105 at one time—with irregular sweats, but could localize nothing to account for it until the sixth day of the temperature, when there was discovered a tenderness over the gall-bladder. On following day the gall-bladder was easily palpated and extremely tender on pressure. On eighth day of this rise of temperature—at night while the patient was asleep—there was an escape of pus, five or six ounces, from the nose and mouth, which proved to be a retro-pharyngeal abscess.

During this rise of temperature there was such active delirium, patient screaming out and trying to get out of bed, that hypnotics were required to control him.

Bowels had continued constipated until after the escape of pus when there was an active diarrhoea for twenty-four hours, which was followed for three days by white, pasty stools. Gall-bladder gradually reduced in size and tenderness disappeared. Temperature came to normal in three days after rupture of abscess—last of the tenth week.

Patient now showed signs of exhaustion—irregular sweats, weak, rapid pulse, and temperature one to two degrees below normal—but began to eat more and for some days seemed somewhat improved. On the eighth day of normal temperature—end of the eleventh week—there was discovered a rigidity of the arms which in two days had gradually extended to the entire body, a well-marked condition of catalepsy, plastic rigidity. During the active stage there were seizures lasting from 30 minutes to one and half hours in which the limbs and body would remain in any position in which they were placed. In the intervals the extremities were found slightly rigid. During this time the patient could be aroused slightly, would open his eyes, but seemed not to understand, although there was no active delirium. The condition of catalepsy disappeared gradually, as it had come on, ending in 12 days from onset. Temperature remained normal or slightly below, cold hands and feet. Acting on suggestion of Delafeld (*Medical News*, Sept. 12th, 1903.) the patient was placed in a chair and gradually raised to a sitting posture. Soon began to take more nourishment. For about two

weeks most movements seemed automatic, but there was then noted an improvement in his mental condition, and patient seemed himself in another month. He has since spoken to his mother of his having had a "tender place under his ear"; of his state of catalepsy when he was requested to hold his arm and leg half raised; and also of the fact that he would get so mad at times at having to lie in bed that he could only cry about it. Patient has been in school all this year and is himself in every way except that he is more easily excited over trivial affairs.

Certain interesting and unusual features in connection with the case:

1. The very rapid onset, resembling the so-called bilious remittent fever, but soon followed by unmistakable signs of typhoid, viz: positive Ehrlich's reaction, enlarged spleen, roseola, tenderness in right iliac.
2. Absence of complications, and seeming convalescence.
3. Unusual number of sequelae, separated by intervals of normal temperature.
4. Unilateral parotitis, undergoing resolution, which usually occurs as a complication. Coincident with this was the lesion of the scalp, which is not described or mentioned in text books or current literature.
5. Acute cholecystitis and retropharyngeal abscess.
6. Distinct, well-defined catalepsy occurring nine days after normal temperature, which as a rule occurs during febrile period.
7. Rapid convalescence and complete recovery.

SECOND LETTER FROM NOTES TAKEN ON A TRIP TO THE PAN- AMERICAN MEDICAL ASSO- CIATION IN THE CITY OF MEXICO.

By DR. D. G. SIMMONS, ADAIRVILLE, KY.

On the four day's run from San Antonio to the City of Mexico it was quite restful to the tourists and delegates to take advantage of occasional stops of the train for water or other causes, to stretch their legs by walking about the station, interviewing the natives and taking notes of novelties. In the northern portion of the Republic there is no sign of life except at the stations, which are from twenty to forty miles apart; grouped about these stations are always a lot of little 'dobe cabins, varying in size from a small chicken coop to a W. goodsbox, in which a lazy, beggarly half-clad lot of natives live and have their being. But they can not be said to move until they get out of doors, and even then they are too

shiftless to get much of a move on themselves, except when one throws among them a few centavos, just to see them scramble, something like a foot-ball game.

In this portion of the State there seems to be no industry, at least none in sight of the railroad station, but begging. But stop! Yes, there is one other, and that prosecuted with commendable zeal. Yes, we will make one honorable exception. There is a larger proportion of babies and small children to the population at each station than can be found anywhere else in the world. And be it said to their credit, they love their babies more, and love each other more, and are kinder and more considerate to their aged parents, grandparents, and the sick and disabled, than those occupying a higher plane of civilization and refinement, and that by large odds. These aged and dependent ones are given the best and warmest places, the best cuts and delicacies at the table, such as they are, and are obeyed, respected and catered to on all occasions. How different in the larger Northern Republic!

Those little cabins are rarely more than one or two hundred feet from the railroad station, yet the population all turns out to meet every train, old, young, and babies. If the baby is four days old it comes out, and its mother comes along packing it.

Sometimes the mother looks like she might be ten years old; sometimes older, but rarely younger. They have a peculiar way of carrying their infants, so as to have free use of both hands. The mothers hitch a bag-shaped sling about their necks and stick the baby into it, head out of top, feet dangling from one side. The little rat never whimpers, and seems never to need much dress, and the present fashion seems to be decidedly decollete. They wash their clothes when it rains; the first rain for five years had fallen about three weeks before we passed along, so we saw them at their best. The men were propping up the railroad station, on the sunny or shady side, according to the weather, with their hands in their pockets; the women and children, having no pockets except their mouths, kept their hands in the begging attitude. Their demands were modest, "Centavo, centavo!" (one cent.)

On one occasion when we were all out hobnobbing with the natives, the he-doctors, the she-doctors, tourists and all, a native boy and girl dressed unusually *decollete*, the boy with the remains of a shirt (which they neglected to wash when it last rained) extending from his neck to his arm-pits, and the girl's shirt just a shade longer—"simply that and nothing more"—walked leisurely through the

crowd, accosting each one with, "Centavo, centavo." The women doctors and the women tourists looked away over their heads, except those looking out of the windows, but the men were out to see everything going. They packed their centavos within their mouths, until they were so full they had their wind about cut off, when they had to retire; but their fortunes were made, and they were ready to marry the next year.

That was a jolly lot, those parti-gendered doctors and the accompanying tourists. They were out for two purposes, viz: to get all the fun and recreation from the trip at all times that was possible, except during the sessions of the Congress, and at those sessions to get as much information, as well as to impart as much information, as possible. All readily agreed to taboo the discussion of subjects relative to medicine, in all its branches, during the journey to and from the City of Mexico. Politics, literature, theology, anecdotes, personal reminiscences, school-boy days, jibes, jokes and jocularities—anything, everything except pills. If any one but mentioned appendicitis, he or she was immediately escorted to the locker and placed in cold storage until the first lucid interval, after which he was restored to all rights and privileges. Fun was had at each other's expense during the runs, and at the expense of the peons during the stops. Dr. Charles A. L. Read was proprietor of the menagerie, and a jollier fellow on a trip I never happened to strike. He was the life of the party and equal to all emergencies. May his shade never grow smaller—it is not likely to grow larger.

A man whom we called William Penn, because he came from Pennsylvania, was always hungering and thirsting after knowledge. His face was the shape of an interrogation point. He wanted to know all about everything and everybody. As there was not a large Southern contingent, he tackled me to know about the South, and especially about the negroes.

"Doctor," said he, "I imagine your negroes are somewhat like those Mexicans we are seeing at the stations."

"If left to themselves they might, after a while, degenerate to something approximating the greasers, but they are so intimately mixed in with the white people that they are necessarily aping their ways, and slowly improving in intellect and business methods."

"What about the crime of assault against the women that so much is said about?"

"While there are some brutes who are overcome by their lust, these are exceptional, while the great majority are entirely trustworthy, amiable, good-natured and forgiving.

Very few of them seem to harbor malice, and if treated properly they are faithful and long-suffering. Perhaps the world fails to find a parallel to the faithfulness of the negroes to their old masters' families during the Civil War, when they had every opportunity for malignant and beastly indulgences."

"But aren't they shiftless and in every way unreliable?"

"The majority now have no to-morrow. If they get in your debt it is your business to get your money. It doesn't disturb their sleep or enjoyment. I think I can illustrate the average negro's characteristics by citing an incident which happened in connection with my professional work in Kentucky."

On one occasion while returning home from the country on one of those pitchy nights so frequently selected for night calls, a very sudden summer rain caught me in a field near a stock barn, disclosed to me by a vivid flash of lightning. I felt my way into the welcome shelter, and, by a long practiced tactile dexterity, I found a place to hitch my horse—none of your harness horses, by the way, but a Kentucky-bred saddler, high spirited and full of fire, yet docile as a cat under kind and gentle treatment. As the rain promised an indefinite continuation and I was both tired and sleepy, I concluded to try to find a soft place to lie down and sleep out my enforced imprisonment.

By feeling around I found it to be one of those stables built all around a log pen, and supposing there might be hay in the upper story of the pen, I cautiously climbed up until I found a long window made by sawing out one of the logs. Feeling the hay through the window, I climbed in, and still using my arms and hands as tentacles, I felt about for a suitable straw bed, but in doing so I got hold of a human foot which kicked out vigorously and simultaneously the half smothered squawking of chickens was heard, almost under me. I was a little startled until a familiar voice gave me more assurance.

"M-M-Mass Bob, is d-dat you, Mass Bob?"

"No, this is not Bob, but I know who you are—up to your old tricks again, Sam."

"Why, dat Mass Doc.—I des sholy glad to see you, Mass Doc. I thought you was Mass Bob an' he des mighty handy wid his gun an' you never can scarcely say what he gwine do nex'. I des knowed he would n't onerstan' 'bout dese—'bout dis here chicken, but I done been out wid you atter dem corpsuses too often to be much afeard o' you much, but dat ar Mass Bob, I dess don't want no tribulations wid him."

"Sam, wouldn't you find it easier to raise

your chickens than to go about of nights robbing hen-roosts?"

"Lawd, Mass Doc, you ain't think I steal dese—dis chicken—dis fool chicken makin' lak he two or three chickens—I lay I larn him better'n dat when I git him home. He des lak a ventrilquist."

"But Sam, how came you here with them at this time of night, if you didn't steal them?"

"Why, Mass Doc, dis de biggest blooded chicken—he no ornery little pee-wee. Why dis chicken lay aiggs big as turkey aiggs, an' dat 'dout any weah an' teah. I des come by an' git dese yer—dat is I mean I git dis yer chicken frum a felleh what we'es raisin' 'em on de sheers. I gwine git mo' atter while. I des come by dar on de way from de meetin'-house."

"Sam, I believe you are as ingenious and ready a cuss in dodging a direct answer as I ever met."

"Thank you, Sah."

"Sam, are you having muc hof a meeting at your church?"

"De bes' kin', Sah. We des fetchin' dem sinners in from all sides, Sah."

"Say, Sam, how do you reconcile your chicken business with your religion?"

"Mass Doc, you des keep on talkin' dem vexmints 'bout dem—'bout dat little ole chicken. If you ain't b'leeve 'bout dat, you des come over to my house an' see some o' dem aiggs. 'Sides dat, what my 'ligion got to do wid my business? Ain't I des pray an' rassel wid de Lawd all night? What mo' He want?"

"It is supposed that there is some correspondence between religious principles and the ordinary actions of life."

"When a niggah git done his day's work, what he gwine do ef he don't go to meetin'? Niggah boun' to have some sort o' jubilation. We des goes to meeting' an' we sings, an' we prays, an' we shouts, an' we des has a good time in gin'ally. An' de Lawd, He des come down, He do, an' be one wid us on six nights, an' He don't fo'git us on the seventh. Niggah neveh feel good as when he shoutin', 'lessen he drunk, an' dat cos' money. Des what you whi' folks git outer yo' 'ligin I don't onerstan'. You neveh shouts none, an' you sings an' prays des lak you glad you mos' thu', an' yo' has no 'surance de Lawd gwine come down an' be one wid you. We des feels de Lawd. You don't 'speience wid Him no way. I lay we gits de highes' place in de kingdom come."

"Sam, when are you going to pay me something for attending your family for the last ten years?"

"Oh! Mass Doc, whenever I gits you down in talkin' 'bout 'ligion right den here you come along talkin' 'bout money. I gwine pay you, co'se I is. What I tell you las' year, an' two or three years befo'? I tell you I gwine pay you, an' I is too. An' I gwine bring you some of dem big aigg chickens, an' I ain' gwine charge you nathin' fo' 'em, neither."

"No, Sam, I don't want any of your raising of chickens."

"Well, den, I can pay in dem heap sooneli, but I gwine pay you soon as I sell my 'backer. Say, Mass Doc, I des cho' outer flour—hain't got none to cook dis chicken—but den I dun fo'git, I gwine keep dis chicken fur de aiggs. Len me a dollah and' a haf to git some flour, an' den when I sells my 'backer I pay you everything and de dollah an' a haf too."

"How could I supply my own family with flour if all my patrons treated me like you do?"

"Oh! Mass Doc, you'se rich. You neveh miss my little savements. I hain't neveh axed you for nothin' yit but what I didn't git it."

"Sam, what is your standard of being rich?"

"I don't know nothin' 'bout no stan'ard, 'cep'n a wagin stan'ard. What you mean 'bout dat, Mass Doc?"

"When do you call a man rich?"

"Why des dis way—When a man git good breakfus' one Sunday mo'nin', an' he know he gwine git anotheh good breakfus' de nex' Sunday mo'nin', dat's what I call being rich."

"According to your definition of riches, Sam, you yourself ought to be rich."

"How a niggah gwine git rich? Time he pay de preacheh—an' de preacheh gwine git his money outer you some way—an' time he pay de doctah—when he do pay him—whar he gwine git any Sunday breakfus'? Den he bleege to have some close an' spellin' books, an' some meat an' bread in de week. I hear dat little jinglin', but I can't see yo' han'. Heah my han' Mass Doc, des drap her in dar. Dat's it, thank you Sah—I gwine 'member you when I sells my 'backer. Say, Mass Doc, when you gwine gi' me dat ole coat o' yone? Ain't Miss July tell you two monts ago it was too slick for you to wa'h? I comin' atter dat coat to-morrow night. Don't you give it to no otheh niggah fo' I gits dar.—Say, Mass Doc, does you 'member de times we usen to have when we was boys togetheh? I ain't done fo'git dat time we walk fo' mile to rob a watermillion patch, an' we des fill a sack full o' dem little striped fellehs, all de same size, an' when we had cea'h'd 'em 'bout two mile you tried to bus one on 'em an' couldn't, an' den I clime on de fence an' tro' it down on

de ha'd groun' an' dat bust it open, den we fin' da an' dese dan' little ole citizens—Hadn't been wid you 'd a cuss, an' you jis did cuss, if I don't mis'member."

"An, Sam, you remember all our follies as though it were yesterday."

"Des seein' you 'mines me o' all dem capels. Mass Doc, wash you go an' see Hannah to-morrer. She des mighty uooly. She ain't neveh been outer bed sence dat time you operated on her an' cuode her of all dem wounds and piles an' things. I tell her you comin' an' she des mighty glad to see you. She des think heap o' you eveh sence you cuode her befo'."

"What seems to be the matter with her—how does she complain?"

"She des mighty pooly. She 'plain wid her head, an' she hain't got no stomach, an' sometimes she sorter franzy. She say she des blege to see you. She say she won't neveh git no betteh 'till she do."

"I'll call there to-morrow as I pass that road and I want to see some of those very large eggs, too."

"You ne'mine 'bout dem aiggs. You know dis chicken not gwine lay no aigg to-night. I gwine fetch you some dem aiggs an' chickens too attar while."

"Sam, I believe the rain has about stopped, and we can go home."

Dat's des what I gwine do—Hannah been lookin' fur me two hour. Mass Doc, I bleeve dis fool chic'en tok an' die just kase I hol' his gouzle a little to keep him frum 'larmin' de whole country. He daid, sho'. What I gwine do wid 'em now, Mass Doc? Is da good to eat now?"

"Cut their heads off and let all the blood run out and they will be all right."

"Mass Doc, how you know so much 'bout strangled chickens? Is you been goin' attar yo' sheer o' chickens attar night?"

"Sam, don't forget about that tobacco money."

"Mass Doc, you think I gwine fo'git 'bout dat? You des wait an' see how I gwine fetch her up."

During the first day's run in Mexico every stop was made available to interview and study up the native Mexicans as seen at the stations, and they were always seen, and smelled, and sometimes tasted, that is, some of us whose stomachs were equal to the task, tasted of their hot tortillas, which was about equivalent to getting a taste of those who baked and made them.

We struck one station about 9 o'clock a. m., just about the right time to catch the men entering upon their day's labor of propping up the station houses, and the women cooking

breakfast. The latter process was performed under a brush arbor, and was rather interesting. The performer on each occasion run the whole gamut of shucking the corn, shelling same, grinding it into coarse meal with a crude stone pestle and mortar, making a dough, patting the dough in the hands as thin as a calf skin and about as large as a breakfast plate, then baking them on flat stones, heated over the coals from a little mesquite brush fire. This was all done while sitting on the ground, their legs straightened out before them, and all this without once changing their position during the whole process.

The mortar and pestle are gradually worn out, and as gradually passed into the cakes. Sand is a good scouring agent, and I suppose it discharges that function internally, in the absence of any external scouring.

If they have a wedding, or company from any other cause, they add hot tamales to the menu. These are made by slightly shortening the corn meal dough, spreading pulverized red pepper on the cakes, rolling it into a spindle shape, wrapping in shucks and boiling until done. They are kept in the pot of hot water until served, so as to have them hot always. When hot they are not bad, but the tortillas require a pretty keen appetite.

POST PARTUM HEMORRHAGE.*

By W. M. MILLER, M. D., MILLERSBURG, KY.

I do not intend to tire you by going over the details of this subject, especially the first and second stages of labor, for we all have had the same experience. I will say in these we need all necessary equipments; these we should always have in our obstetric bag. Besides these, cleanliness, patience and nerve are required. We should always, as members of the noblest profession there is, strive to be scrupulously clean, especially so in attending a case of obstetrics, never touching the patient without first thoroughly washing our hands and arms in a hot antiseptic solution, thus preventing puerperal septicaemia. Our patience is often sorely taxed by long hours of waiting; perhaps sitting through the long night on a hard stiff-back chair or stool, or on the side of the bed, trying to pull the arm out of it's socket, and after each pain, hear that ever accompanying question, "Doctor, can't you do something?" There your nerve comes to the test. You cannot say no, for the patient or the old women around would say—"You know nothing about this work," and

*Read before the August meeting of the Bourbon County Medical Society at Millersburg, Ky., 1904.

perhaps they think so. Then they say, "Doctor so and so did so and so." Then to even up, you begin to tell some miraculous story about Mrs. so and so and how well she came out; and then try to make them believe you have been the most successful obstetrician in the Bourbon County Medical Society. You have all been through this; have told the same story; so I will only try to have my paper to bear on the third stage of labor and post-partum hemorrhage. The third stage commences after the expulsion of the child. It is of paramount importance to the safety of the mother that it should be conducted in an efficient manner; for it is now that the uterine sinuses are closed, and the frail barrier by which nature effects this may be very readily interfered with, and serious and even fatal loss of blood ensue. Here we too often fix our attention on the birth of the child and the rest of the delivery is neglected. As soon as the child is expelled the uterine fibres should contract in all directions, and the hand following the uterus down will find it forms a firm round mass lying in the lower part of the abdominal cavity, the after-birth remaining in the cavity as a foreign body.

Any undue haste in promoting the expulsion of the placenta is apt to be followed by profuse loss of blood, or post-partum hemorrhage. Hemorrhage, during or shortly after the third stage of labor, is one of the most trying and dangerous accidents connected with parturition. There is no emergency in obstetric practice that so severely jeopardizes the patient's life—which leaves less time for reflection and consultation, requires more prompt decisive action. Hemorrhage from rupture, or from malignant or benign growths of that organ, or from laceration of the cervix or vagina, is not included under the term post-partum hemorrhage.

Therefore, learn well the manifestations or signals that nature hangs out. Fortunately it is to a great extent a preventable accident. I believe this fact cannot be too strongly impressed on the practitioner. If the third stage of labor be properly conducted and treated as if hemorrhage were impending, it would not often occur. Regarding the accident as preventable, it follows that the records of hospitals and large lying-in institutions from which the greatest proportion of statistics are gathered, and in which labors are conducted presumably by men of skill, naturally show a smaller percentage of cases of post-partum hemorrhage than are observed in private practice. In corroboration of this statement, we note that the record of Guy's Hospital furnishes but one case of dangerous post-partum hemorrhage in 2,040 labors. St. Thomas'

Hospital Reports give one in 2,172 labors. Veit, from the statistics of a number of continental authorities, was able to collect only five fatal cases in 47,765 deliveries. This latter statement certainly under-estimates the death rate from this source. In general it may be stated that mild cases of post-partum hemorrhage occurs once in one hundred labors. Severe cases, once in 1,000 to 1,200, and fatal cases once in from 4,000 to 6,000 labors.

The principal cause of post-partum hemorrhage is inertia of the uterine muscle. Normally, with the separation of the placenta, there is a certain amount of blood lost, which, however, is quickly controlled by the firm contraction of the uterus; hemorrhage of any considerable amount cannot take place from the cavity of a thoroughly and permanently contracted uterus. There are numerous remote causes which contribute, directly or indirectly, to the occurrence of post-partum hemorrhage. Prominent among them is exhaustion following a prolonged and difficult labor. After precipitate labor and sudden expulsion of the child, flooding may occur before time enough has elapsed for uterine retraction to take place. Overdistention of the uterus, as in hydramnion, multiple pregnancy, a distended bladder, or rectum, all tend to inhibit normal uterine contraction.

The loss of blood may commence immediately after the birth of the child before the expulsion of the placenta, or not until some time afterward, when the contracted uterus has again relaxed. It may commence gradually or suddenly; in the latter case it may begin with a gush; and in the worst form, the bed-clothes, the bed and even the floor are deluged with blood, which, it is no exaggeration to say, is pouring from the patient. If now the hand be placed on the abdomen, we shall miss the hard round ball of the contracted uterus, which will be found soft and flabby; or we may be unable to make it out at all. There are few sights more appalling to witness than one of the worst cases of post-partum hemorrhage. The pulse becomes rapidly affected, and may be reduced to a mere thread, or it may become entirely imperceptible. The respirations are shallow and rapid, or gasping. Syncope often comes on (not always an unfavorable occurrence, as it tends to promote thrombosis in the venous sinuses) or extreme restlessness soon supervenes; the patient throws herself about the bed, tossing her arms wildly above her head. She cries out for more air, the skin becomes deadly cold and covered with profuse perspiration; if the hemorrhage continues unchecked, we may next have complete loss of vision, convulsions and death.

Formidable as such symptoms are, it is satisfactory to know that recovery often takes place, even when the powers of life seem reduced to the lowest ebb. If we can check the hemorrhage while there is still some power of reaction left, however, slight, we may not unreasonably hope for eventual recovery. It may be months or even years, before the patient recovers from the effect of only a few minutes of hemorrhage.

Treatment: Prophylaxis.—Post partum hemorrhage is a preventable accident, as I have before stated. The preventive treatment must be directed to the uterine retraction. In all cases the hand should be held on the abdomen over the uterus from the moment the child is born until the placenta is expelled; and after the expulsion of the placenta, the uterus should be watched for at least an hour in the same manner by the physician. Any tendency to abnormal relaxation should be immediately combated by friction, or if need be, by more active manipulation. When the uterine contractions are feeble ergot should be given, either by the mouth or hypodermically, 1-2 to 1 drachm repeated hourly until retraction is fully established. This precaution is especially advisable after chloroform anesthesia. A firm abdominal binder may be used to maintain uterine retraction. If needed, compresses of folded towels may be placed under the bandage, one on either side of the uterus, and one immediately above it.

The occurrence of post-partum hemorrhage demands prompt and vigorous measures for its control. All needed agents should be ready for instant use should abnormal bleeding occur, as there are only two means which nature adopts in the prevention of post-partum hemorrhage.

So the remedial measures also may be divided into two classes. *First*, those which act by producing uterine contraction. *Second*, those which act by producing thrombosis in the vessels. Of these the first is the most commonly used, and it is only in severe cases, and after hard trial, that we resort to the second remedy. First, in making uterine pressure, the patient should be placed on her back, pillows removed from the bed and the foot of the bed elevated; if the uterus be found relaxed and full of clots, by firmly grasping it in the hand contraction may be brought about and the contents be expelled and further hemorrhage at once arrested. Should this be the case we must keep up contraction by gently kneading the uterus until we are satisfied that undue relaxation will not recur. If this does not control the hemorrhage the hand is swept over the abdomen, moving the abdominal wall in a circular direction over the uterus. The

uterus is quicker to respond to vigorous friction than to direct pressure exerted at any one point. It may be necessary to introduce one hand into the uterus to remove placenta, membrane or clots. This may serve a double purpose, of emptying the uterus, and, by the stimulating effect of the hand in the uterus, of provoking strong contractions; with the other hand over the abdomen, the uterus may be compressed between the two hands. Raking the uterine wall with the finger tips is a most efficient method of exciting contraction. Compression of the abdominal aorta, as a temporary means of controlling this form of hemorrhage, has long been practiced. While the physician is thus engaged in seeking to stimulate contraction, he may direct the nurse in giving other remedies. A full dose of ergot should now be given, preferably hypodermically. In the presence of exhaustion stimulants will be demanded at once. Thirty drops to 1 drachm of sulphuric ether, 1-15 to 1-20 grain strychnia, or several drachms of brandy should be given hypodermically. The child should at once be put to the breast, as nursing provokes uterine contraction.

As far back as the time of Hippocrates, we find mention of the employment of various irritating chemical solutions in the cavity of the uterus for the purpose of exciting uterine contractions and arresting bleeding. The introduction of ice into the uterus, while not now used as much as formerly, is, in the absence of other measures, exceedingly serviceable. A lump of ice the size of an egg is carried to the fundus of the uterus and held in position until contraction occurs. The application of acetic acid, lemon juice, or alcohol in the uterine cavity is a powerful astringent and haemostatic. Penrose for many years advised the employment of vinegar for the control of post-partum hemorrhage in the following manner: A clean piece of lint or gauze is saturated with vinegar, carried to the fundus of the uterus and squeezed dry, the fluid running down over the walls of the uterus. A single application will often be followed by vigorous uterine contractions. If necessary repeat two or three times. Barnes recommended in extreme cases intra-uterine injections of a solution of perchloride of iron. *This procedure cannot be too strongly condemned.* The intra-uterine injection of sterile water has recently come to be regarded as one of the most reliable means we possess for the control of post-partum hemorrhage. In many of the continental hospitals, and very largely in America, this method has become the routine treatment for uterine hemorrhage. The external genitals should be well smeared over with carbolyzed vaseline or olive oil to relieve

pain from contact of the hot water with the skin. After removing the placenta and all clots from the uterus and vagina, a long douche tube, preferably of glass, with opening only at the end, is carried to the fundus; several gallons of hot water are injected at a temperature of 120 degrees F., or as hot as can be borne. The temperature should be accurately determined by a bath thermometer. Use a fountain syringe. If the hemorrhage be not checked by this means, the injection should be repeated, after adding to the sterilized water enough pure acetic acid to make a 3 per cent solution. This is aseptic, and is free from the dangers of vinegar and iron. Its action is usually immediate and permanent. If this should fail to stop the bleeding, the uterus should be tamponed with strips of iodoform gauze. Often this procedure, if done properly, will control a hemorrhage which resists all other measures. If this should fail and the hemorrhage recur when the gauze is withdrawn, repeat and soak the gauze in saturated solution of alum.

After a severe case of post-partum hemorrhage you will then be called upon to save the life of your patient from exhaustion or acute anemia. Without entering into details, I would recommend as the most available measures for restoring the volume of circulatory flow, sub-cutaneous or intravenous injection of normal salt solution, and rectal injections of this same solution.

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DISCUSSION.

Dr. C. G. Daugherty, Paris, Ky.: I have enjoyed Dr. Miller's paper which so graphically pictures post-partum hemorrhage. I believe that the chief means for preventing it are: following the fundus down after delivery and keeping it contracted by external irritation or pressure for at least an hour after delivery, and by not too great haste in using Crede's method of expressing the placenta.

Sterile hot water should always be at hand in obstetric practice and a clean douche bag and sterile glass nozzle should always be in the obstetric kit. This alone or with the addition of pure acetic acid will usually suffice for the treatment of the average case of post-partum hemorrhage, especially if pressure be made on the abdominal aorta. If this does not promptly, the sterile hand should be introduced into the uterus and the uterus flexed toward the pubes over the enclosed fist. When the hemorrhage has occurred before delivery of the placenta, or where a portion of it is retained, either Crede's method or manual extraction should be resorted to, the internal hand assisting the external then readily controls the hemorrhage.

Perchloride of iron is dangerous on account of the clots formed by its use. Ice, lemon or vinegar, or the unsterile hand may have to be used in emergency, but antisepsis and asepsis can usually be observed if we make the effort, and we thus avoid saving the patient from hemorrhage to have her die of septicaemia.

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Dr. F. L. Lapsley, Paris, Ky.: There is no class of death so distressing as those in labor cases, nor where the mantle of charity needs to be so widely spread. Fortunately these cases are rare. We are often called and arrive on the scene unprepared and have to disregard our rules as to cleanliness. In this class of cases nothing is so effective as the hand introduced to the fundus and arrest of the hemorrhage by kneading and compression, the fingers within and without exciting contraction.

Dr. S. J. Anderson, Clintonville, Ky.: I have never had or seen a case and hope I never shall, but would resort to the remedies and methods suggested in the paper and discussion.

SIMPLICITY IN SURGICAL METHODS.*

By LOUIS FRANK, M. D., LOUISVILLE, KY.

Professor of Abdominal and Pelvic Surgery, Kentucky University, Medical Department.

A comparison of the operating room of fifteen years ago with one of six or seven years since, would show a most striking dissimilarity in its accoutrements and furnishings, though hardly any greater than the changes which have taken place in our methods of work during the past five or six years. This evolution in surgical methods or technique has been gradual and so slow as to be hardly perceptible, though by comparison of the various periods we find it quite marked. The trend has been towards simplification, towards the abolition of the unnecessary, keeping in mind always the results, which should, as a consequence of changes, be always as good, if possible better, than those obtained under old ways, otherwise there is no progress. The constant aim has been to better results, not only as to the ultimate end attained, but as to the manner of obtaining or arriving at that end. One of the first advances was the realization that antiseptic surgery was not so good as aseptic surgery, that the carbolic spray and the carbolized instruments and bichlorid hands did not yield such brilliant results as our experimental laboratory work indicated should be expected and that

* Read by invitation before the Marion County Medical Society, December 20, 1904.

it was far better to prevent the entrance of poison than to permit its introduction under conditions which we believed might inhibit its growth. We also learned that though theoretical and laboratory asepsis was unobtainable in the operating room, we could obtain practical cleanliness. Even in spite of this practical or obtainable asepsis patients did badly at times, wounds suppurating, so we learned that we must conserve more and more the energies of the patient; that if this was done the natural forces would do much toward recovery and healing as we wished it, and that the body took care of itself far better than we thought. All this has brought about much simplification, not only in the actual work, but in the preparation and after treatment of our patient.

In the matter of the operating room, fancy walls and fancy fixtures, of all kinds, have been done away with. The most striking change is in the absence of the great number of solutions that were formerly present, and the odor of carbolic acid and iodoform which were at once characteristic of the hospital and the ear-mark of the surgeon. Glass-top tables are used, all furniture and the walls being painted with an impermeable white enamel paint so as to permit cleansing of everything without impairing its usefulness or doing it harm. The only solution that we see in the modern operating room is the normal saline solution.

The lack of complexity in the work, as now done, can best be illustrated by the citation of the preparations necessary for operation, not only upon the part of the operator, but of the dressings, of the patient, and the material used in the work itself.

Unless there is some special contra-indication, such as general debility, or other general, or local conditions, which may require some direct treatment in anticipation of the work to be done, the patient is sent to the infirmary on the day preceeding the operation. This is done to familiarize them with the nurses, and with the surroundings. They are permitted the freedom of the room, and the halls until that evening. During this time it is advised that as much water as possible be taken. In the evening a full tub bath is given and a purgative is administered, usually castor oil or some mild saline. After the bath the patient is put to bed, and the field of operation is now covered with a soap poultice for two hours. At the end of this time this poultice is removed and the skin is thoroughly washed with warm water and soap, no brush, however, being used, but instead a gauze sponge. After cleansing off the soap, the part is bathed in absolute alcohol and a

sterile dressing pinned over it. The diet this same evening consists of easily digested food, without starches, such as will leave no residue in the intestine. Next morning the patient receives a high enema about four hours before the time set for the operation. No breakfast is given. The patient is examined to see that there is no contra-indication to the administration of ether, which is our anaesthetic of choice, we having given up chloroform after a careful study of the relative dangers of the two drugs and of the after effect of each.

Our work, by preference, is done early in the morning; this is much the safer time for the patient. This has been very clearly proven, I believe, by the work of Tait, Bantock and others in which the result of work done in the morning was compared with similar cases operated upon in the afternoon under precisely the same conditions. The evident advantages are that one is fresher in the morning, as one's mind has not been tried by the many details of daily work and trials, and the body has not been subjected to the dust and dirt of hours of exposure, the sweat glands have not, by their activity as a result of bodily efforts, covered one with sweat containing bacteria, and one has not had the opportunity nor the temptation of coming into contact with septic cases, to do any dressings, or look at any wounds, or handle any cases surgically unclean.

The patient, after being anaesthetized, is taken into the operating room and the preparation completed. This, in addition to properly protecting the patient by means of blankets, is to give the field of operation another cleansing which is done by the use of soft soap, warm water, and sponge, washing the parts carefully, but not rubbing briskly, nor with any force. Care is exercised to cleanse the natural folds and depressions about the field of work. The soap is now washed off with sterile water and the entire field and an area of six or eight inches beyond is covered with a flat gauze sponge of about eight thicknesses which has been well saturated with absolute alcohol. This is permitted to lie in place until the sterile sheets and towels protecting the entire body and exposed portions of the table have been arranged, and is removed only when we are ready to begin work. Preliminary to the incision its line is wiped dry with a sterile sponge.

Now as to the preparation of the operator: the surgeon and, equally, surgical assistants should above all constantly bear in mind that they should avoid direct contact with all septic or purulent matter. I trust it is unnecessary to say they should have a daily bath and

change of linen. Before entering the operating room, we divest ourselves of every portion of our clothing and don an operating suit composed of a washable coat, trousers and shoes, and in the winter an under-shirt, which suit never leaves the infirmary. This is worn no where else and is for no other purpose than to be worn during an operation. The coat has sleeves which are cut off above the elbow so as to permit free scrubbing of the hands and the forearms to a point above the elbow.

This is done with hot water, stiff brush, green soap and mustard, extending over a period of fifteen minutes, the water being changed three times or more, the nails being usually cleaned after the first washing. We have our assistants go through the same process and instruct them in a certain routine as to the washing, so that no part will be overlooked. We also advise scrubbing the right hand first, in those who are not left handed, or in those who usually use the right hand more in their manipulations. After the last washing we don a sterilized gown, then wash again for a few minutes in sterile water, and then rub the hands and forearms well for three or four minutes in comparatively pure alcohol. Rubber gloves are never worn in clean work, but are always worn when we suspect pus or when we follow some other work by an abdominal section. The assistant may or may not wear gloves, depending upon the character of the work.

The manner of instrument preparation is also very simple. Edged instruments are placed in absolute alcohol for ten or fifteen minutes, rinsed in sterile water, wiped dry and laid on a sterile towel with the other instruments. All but the cutting instruments are boiled in soda solution for fifteen minutes, then wiped dry with a sterile towel and placed on the instrument table, which latter is covered with a sterile towel. They are then protected from all dust by a sterile cover until we are ready for the work. The sponges used are those made of gauze. They are prepared with the towels in a Boeckmann sterilizer. We do not use the expensive especially constructed apparatus for sterilizing with steam under pressure, having found the other just as efficient. Water is filtered and sterilized by boiling.

Before beginning our work we have mapped out in our minds what we are to do, just what emergencies or complications may come up in the case; if there is any doubt as to diagnosis, the possibilities are kept in view and with this before us only such instruments, and just as few as are necessary for the work in view, are selected. The same idea is car-

ried out in the selection of the suture and ligature material which is preferably cat-gut, though for thick pedicles we use the Pagenstecher celluloid yarn. Just enough material is selected to complete the contemplated work and no more. Our ligature and pedicle material is boiled with the instruments, the gut used being the commercially prepared gut of Van Horn.

After the operator has prepared himself and the instruments, and while the patient is being gotten ready, all needles that are to be used are threaded by the operator with the proper size and character of suture material that will be required. Ligatures and gut are cut the length it is thought may be required and these are placed in such order as they will be needed and in such a way as will come most handy to the hands of the surgeon. The material and instruments for emergency or possibility are left in reserve, covered in a sterile towel. They are not touched unless occasion arises for their need. By this arrangement we do away with an unnecessary assistant, and just here permit me to say that in the ordinary abdominal operation, amputation, hernia operation and the usual run of work, rarely is more than one assistant required. We believe that not only should all necessary assistants be eliminated, but also visitors. In our private work there are present only four besides the operators, one assistant, two nurses and the anesthetist. These and these only take part in the actual work.

I do most of my work where there is an interne, but his duties consist mostly of preparing the patient for operation, so as to avoid bringing those who take active part in the operation in contact with the surgically unclean patient. Our instruments are placed where they are in easy reach and no one but myself is permitted to touch or handle them. In this way the possibilities of infection are reduced to a minimum.

Now where does this differ from the work that we have been doing in the past, and why do I call this "Simplicity in Surgery?" As to the preparation of the patient: the week or ten days in the infirmary, preliminary to operation, is done away with. We have done away with all that preoperative fussing and fuming which in our opinion only excites a patient and impresses him unduly with the seriousness of the work, and which has a worse effect upon the patient's mind than any physical good which might be produced. Tait, the greatest abdominal surgeon that the world has probably yet produced, made apparent light of a contemplated operation, and by his conduct and work impressed the patient with the idea that it was a trifling

matter, that recovery would surely follow, and in this way had a good effect upon the nervous system of the patient, sending him to operation buoyed up and not depressed and anxious.

Do not understand me as advocating the making light of surgical work, for I believe that the family and friends should be always informed of the seriousness or of the dangers, (for there is no operation, however slight, that is devoid of danger); still these things should be withheld and kept from the patient as much as possible and as much as is consistent with honesty and one's conscience.

You will further note that we have done no scrubbing with a brush of the field of operation. We think it may be productive of much evil, for not only does it produce hyperaemia, but we have seen it produce abrasions; it stimulates activity in the sweat glands, washing out micro-organisms in the skin, and causes undoubtedly more harm than it does good. Except the parts that are covered with hair we do no shaving, and with the exception of preparation for work done about the vagina, no bichlorid is ever permitted to come in contact with the patient or with the operator. We all remember when bichlorid was used for irrigation. The operators soaked themselves and the field of operation in it. They soaked the gauze that was used for drainage and dressings in bichlorid. This poison was then abolished, and except for the direct preparation of the patient and the surgeon's hands, it was not used. We have done away with even this use for it, except in the one instance above mentioned. Whenever I see a man using bichlorid I cannot help but feel that he is not sure of his asepsis. You will also note that we have done away with solutions for the hands, instead using only alcohol. We feel certain from our past experience that this is the only thing that is necessary. You will notice further that no mention is made of bichlorid gauze, or of iodoform, or of dusting powders, or anything of that sort. These are also things of the past and have no place in modern surgery. The only place that I can conceive of iodoform being used is in tubercular diseases such as joint suppuration or tubercular sinuses, or something of this sort. Notwithstanding this there are men who tampon wounds and cover wounds with iodoform gauze, and layer upon layer of bichlorid dressing, and yet they do not get primary healing.

For suture and ligature material we are adhering almost entirely to cat-gut; and why? Because of lack of tension and consequent necrosis, and because of absorption which does away with fingering the wound and

early dressings. We never dress a wound under two weeks, usually not until the patient is ready to leave the infirmary.

Following this method for the past several years, I have had but one case of suppuration in the sutures in a great number of operations; and this is in work of all sorts, amputations, appendicitis, cysts, pyosalpinx, hysterectomy, gall-bladder operations, and gland dissections, hernia and a great variety of other conditions. I might be disinclined to make this absolute assertion did I not know of similar results in the work of some of my friends who are following practically the same methods. When I speak of primary union I mean union without a drop of pus, serum, or exposed granulations, a union which leaves behind at the time of dressing a linear cicatrix which is almost impossible to see at times in its entirety. In the operating room we have striven to abolish the entrance of septic materials of every variety in every possible way rather than to assume its presence and to combat it and render it innocuous.

Further it is believed that every additional presence in the operating room adds to the dangers as a rule, and the surgeon does all that he possibly can to avoid the presence of one or more unnecessary assistants or visitors. The use of few instruments is an important detail, as aiding rapidity and promoting dexterity, and adding to the facility with which the work is done. It is surprising with how few instruments good work can be carried out properly and successfully. Many instruments confuse, and make one less reliant upon one's own skill but more upon mechanical aids. For instance in an appendectomy, aside from the needles and suture material, six, at the very most eight instruments are required. So likewise for an ovariectomy or for a hysterectomy very few are needed. For hernia operation not more than eight or ten instruments are necessary.

As to drainage, we have almost done away with it. When it is used it is of the slightest sort and for the shortest time. Packing is never used unless we have extensive infected areas to wall off. We thus not only by our methods and by attention to those details do our work quickly, but we conserve the energies of our patient and thus take advantage of every thing which may aid in achieving the best results.

The after management of cases is ordinarily most easy, and this very lack of meddlesomeness and interference is the one thing most difficult to uninitiated. They want to be doing something to stop vomiting, to ease pain, to move the bowels, maintain the pulse, control temperature, to look at the

wound and a thousand and one other things. I would say, let your patient alone and make everybody else let him alone. We give water as soon as nausea and vomiting cease. We give heroin, 1-10 or 1-12 grain doses, twice daily during the first 48 hours, the third day a saline followed in four hours by an enema. When the bowels begin to move, and very rarely do we have trouble getting them to move, we begin feeding and by the fifth day are giving a fairly liberal diet which is made general on the eighth or tenth day. The wound, let alone; do not be too curious; nature objects to prying, she objects to meddlingness, to fussiness, to pottering, and to the unnecessary. So should the surgeon.

PROGRESS IN GENERAL SURGERY

UNDER CHARGE OF IRVIN ABELL, M. D.,
LOUISVILLE, KY.

ON THE MORPHOLOGY OF CARCINOMA AND THE PARASITIC THEORY OF ITS ETIOLOGY.

In the December Annals of Surgery Geheim-Medizinalrath, Professor Doctor Johannes Orth, of Berlin gives his views, believing himself to be in accord with the majority of German pathologists, concerning two fundamental questions, which are as follows: In what way is cancer morphologically characterized? and, What can be said concerning the parasitic origin of the disease?

With regard to all that the first question involves, there can be no doubt that the characteristic and distinguishing features of the cancer cells are that they are none other than epithelial cells. They are epithelial cells not only in accordance with their structure, with respect to the nature of their protoplasm and nuclei, not only epithelium in accordance with their biological activities, but they are also epithelium in accordance with their origin. There is no metaplasia from connective-tissue cells or cells of that nature into epithelial cells, into cancer cells; it is true that one kind of epithelium can be transformed into another kind, for example, cylindrical cells into squamous cells, squamous cells into cylindrical cells, but an epithelial cell can never be made from a connective tissue cell, and, vice versa, a connective-tissue cell can never be transformed into an epithelial cell. A strong support for the conclusion that all cancer cells originate in regular succession (by inheritance) from preformed epithelium is supported by secondary cancers, for they demonstrate by the innumerable mitoses which the cancer cells show, how vigorously these multiply, so vigorously

that the entire growth of these secondary growths can in this way be entirely explained. They demonstrate in the beginning, by the appearance of the first cancer cells in the lymph spaces of the lymphatic glands, by the presence of cancer cells in the blood vessels, that detached cancer cells represent the foundation, the starting point of new cancerous nodules. It can always be shown by investigation of serial sections, especially in embolic formation of cancers in the lung or in the liver, that a cancerous exuberant growth in the neighborhood of the vessels always takes its exit from a cancerous growth through the wall. There is no contact infection by way of the tissue surrounding the vessel; but a continuous connection between the vessel embolus and the perivascular cancer is always present; the embolus has by uninterrupted increase of its cells grown through the wall into surrounding tissue. Of very special importance for the assumption that all the cells of a secondary cancer have arisen from detached cells of an already existing cancer is the suppression of the local cells at the point of new growth. All this goes to prove that the epithelial cancer cells form the essential element of the cancer; but they are not only the most important, but indeed the only important element.

With regard to the second question, if the primary cancer, with all its metastases, histologically and histogenetically, is nothing more than a great family of epithelial cells, all of which have a common origin from preformed epithelium, then it is not possible for a parasite to be the chief etiological factor, as in the diseases which are known to be parasitic, such as a pus focus or an infectious granuloma. The pus focus is a purely local manifestation, but either a primary or metastatic pus focus: there is never any tissue between primary and secondary pus foci. In order to produce pus, or tuberculosis, etc., it is sufficient for the pus cocci, or tubercle bacilli to reach suitable media; to bring about a secondary cancer, it is absolutely necessary that cancer cells from a primary or from a similarly created secondary tumor shall reach the particular spot, and there continue their growth. In the case of secondary cancers we have to deal with a successful transplantation of cancer cells; in the case of pus foci, or tuberculosis, there occurs a transplantation of the parasites, which do not themselves form the new focus, but they impel the local tissue, without any co-operation of the tissue of the primary focus, to certain pathological changes. Therefore there is an important difference between these two classes of phenomena; and one cannot conclude that, since in the

case of pus foci, tuberculosis, etc., parasites play a role, this must also necessarily be the case in the carcinomatous new growths; one can, however, say, that if in cancer, parasites should happen to play a part, then these parasites must be of an entirely different kind from those above mentioned, because they must bear the closest relationship to the cancer cells which characterize the growth. He does not consider it impossible for an intracellular parasite to play a part here; but it is impossible for it to play an independent part. It is a matter of no consequence etiologically, in proving the transplantability of cancer, to produce a secondary cancer even upon another individual; but it is of consequence to produce a primary tumor. As long as that is not successfully accomplished, and that by means of an organism in pure culture, so long is also the parasitic nature of cancer not proved. The following are his conclusions: (1) No one up to the present time has produced proof that carcinoma is of parasitic origin. (2) There is no necessity to assume a parasitic etiology in carcinoma.

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A CONTRIBUTION TO THE STUDY OF VARICOCELE.

In the December issue of the California Journal of Medicine, Dudley Tait presents under the above title views that are so directly opposite to those generally accepted regarding this condition that the writer in charge of this department feels justified in giving below a rather full abstract of his paper. Our knowledge of the etiology of varicocele is nil. Writers of text books continue complacently to reiterate a long list of incongruous anatomical factors, and teachers, with childish unanimity, seldom fail to burden their students with these same fallacies. The study of the cremaster as a causative agent in varicocele is not devoid of interest. First mentioned by J. L. Petit (1707), thoroughly investigated from the double standpoint of anatomy and physiology in the thesis of Perier (Paris 1864), and again considered by Second (1885), this theory like numerous other European creations, slowly drifted across the pond, and in 1892 was rehabilitated by McGraw as an "original contribution." The action of the cremaster is strikingly illustrated in severe abdominal strain or severe coughing; its fibres contract simultaneously with the muscles of the abdominal wall, causing compression of the veins within the inguinal canal, elevating the testicle, drawing taut the fibrous sheath of the cord, thereby compressing its vessels and compensating for the insufficiency of the valves in the spermatic veins. In individuals with relaxed dartos and undeveloped

cremaster, the spermatic veins are unable to cope with the effects of the increased pressure. Hence dilatation and possibly stasis.

Frequency; varicocele exists in one out of every three or four males between the ages of 18 and 30. That a difference of opinion prevails in France and England, and also in this country, as to what constitutes a pathologic condition of the spermatic veins, is evidenced by the rejection of recruits in these countries. Thus in England we find 2.3 per cent and in France only 0.16 per cent. In the vast standing army of France the percentage of men retired yearly on account of varicocele averages only 0.13 per cent; Senn, in examining 9,815 recruits for the Spanish-American war, found varicocele present in 2,078. One half of these were entirely ignorant of the condition, and only three or four acknowledged the slightest discomfort or pain. In no case are the genito-urinary disorders (polyuria, dysuria, lumbar pains, spermatorrhoea, impotency and other sexual neurasthenic symptoms) due to the venous abnormality.

Pathology; the complete development of varicocele generally comprises two stages: First, dilatation; the majority of varicoceles show no further progress. In such cases the veins are not varicose; the walls remain thin. Secondly, the dystrophic disturbances characteristic of chronic phlebitis, sclerosis and hypertrophy of the muscular layer, a true varicosity. In old varicocele chronic vaginitis is frequently found.

Treatment; arguments against the usual operation for varicocele (excision of veins).—First, from a standpoint of pathology, it is not rational. In the great majority of instances the veins do not offer marked lesions; they are simply dilated; the walls remain thin and show no sclerotic changes. The dystrophic lesions occur much later and more gradually than in varicose veins of the lower limbs, and apparently indicate nature's method of controlling ectasia of the veins. Second, the severe and not altogether harmless character of the operation, is not warranted in an affection, which in most instances may be called an innocent "phantom tumor." Third, recurrences after excision are not unknown, and complications are rather frequent. Indeed, according to English authors, softening of the testis invariably occurs after resection of the veins. Fourth, the frequent association of hydrocele and varicocele, especially in old and large varicoceles (25 to 30 per cent), calls for a simpler method, capable of curing both conditions. Fifth, the modern operation of resection of the veins may be safer than those of ancient times, but our late results are by

no means superior to those reported by Celsus.

Resection of the scrotum exposes to well-known complications and not infrequent recurrences; in a series of 67 resections, Annequin reports 21 recurrences. It is the author's view that a rational and efficient method of treatment for varicocele should fulfill the following conditions: First, no tissue should be removed. Second, the arterial and nerve supply of the testicle should not be endangered. Third, the operation should be simple, rapid, bloodless and devoid of great pain. Fourth, the patient should not be compelled to remain in bed. He believes all these conditions are fulfilled by the operation of transposition (Longuet) of the testicle, combined with eversion of the tunica vaginalis. This operation is begun as for the eversion of the tunica in hydrocele, with however the following modifications: The scrotum is held firmly by the assistant, who pushes the testicle upward 5 to 8 cm., according to the degree of laxity of the scrotum and the level of the opposite testicle.

Under local or, exceptionally, spinal or general anaesthesia, a 4 to 5 cm. incision is made directly over the upper pole of the elevated testicle. A similar opening is made in the tunica, care being taken to carry the incision sufficiently high to avoid all folds or cul-de-sac. By means of pressure from behind the assistant now luxates the testis from its serous sac, and then lifts it gently up between two fingers, strictly avoiding traction on the cord which will invariably cause nausea and pain. The different scrotal layers retract in the direction of the cord, the posterior surface of which comes directly into view. Laterally are the edges of the retracted tunica, which are sutured around the cord, including the subjacent cellular tissue and approximating the edges of the serosa in such a manner as to make a snugly-fitting, natural elastic bandage, as high as possible, around the cord. All folds in the tunica should be avoided. Both index fingers are now inserted into the loose cellular tissue adjoining the raphe, about 6 to 8 cm. higher than the original position of the testicle, and then rapidly separated a distance of 5 or 6 cm. The testicle is then dropped in the resulting cavity. In the new position the testicle is slightly twisted on its axis, being in retro-lateral version instead of normal anteversion. A similar twist occurs in the cord and serves to augment the pressure on the vessels. The scrotal wound is closed either in the transverse or vertical direction. It is unnecessary to keep the patient in bed after the first day. Both dressing and suspensory may be dispensed with after the first week. Ha-

bitually the reaction is nil. Mobility of the testicle may be noted as early as the second day. Upon close examination an anterior meso-testis will be noticed corresponding to the scrotal incision.

From his cases and numerous experiments on animals he has demonstrated a new collateral venous circulation, an increased normal circulation, and a new fibrous capsule; numerous macro and microscopic sections of the testis failed to show degenerative lesions.

Operative Indications; in civil life varicocele operations are very seldom necessary, or even justifiable. The treatment of the vast majority of varicoceles in sane individuals calls for nothing more than the temporary use of the suspensory and some local hydrotherapeutic measure. One *should* operate: (1) Large or painful varicocele, inducing testicular atrophy or marked endophlebitis. (2) Varicocele causing the rejection of candidates for certain positions (army and navy). One *may* operate: (1) Voluminous, painless varicocele, equivalent to an appreciable deformity. (2) Smaller varicocele at the patients repeated request to be rid of a deformity. One *should never* operate: (1) Varicocele in genito-urinary hypochondriacs or in neurasthenics. (2) Simple dilatation of the veins inducing no symptoms (the commonest form of varicocele).

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THE USE OF ADRENALIN CHLORID IN LOCAL ANAESTHESIA.

B. B. Athison, D. D. S., in the October Dental Register, mentioning the ill results oftentimes following the employment of cocaine anaesthesia, states that he had almost abandoned the employment of the drug when his attention was called to the possibilities of adrenalin chlorid. The idea occurred to him that adrenalin would make a happy combination with the local anaesthetic he had formerly employed, i. e. cocaine, nine grains, antipyrin two grains, in one ounce of distilled water. He found that by adding one dram of adrenalin to this formula he could use it with safety in all cases, as the adrenalin, being a vaso-constrictor, aided greatly in rapidly anaesthetizing tissue locally. It retards the absorption of the cocaine so that anaesthesia may be produced with about one-half the quantity of cocaine ordinarily required; it alleviates the danger of cocaine, not only by reducing the amount necessary, but also by virtue of its action as a cardiac stimulant.

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HIP-JOINT AMPUTATION WITH REPORT OF CASES.

Paul F. Eve in the October issue of the

Southern Practitioner reviews the history of this operation before proceeding with his report of cases. Morand was the first to suggest it in the year 1739; and in 1743 Ravaton proposed to operate by the removal of the hip-joint, for a gun-shot wound of the thigh, but was over-ruled by his colleagues. The first operation that was performed was by La-Croix d'Orleans in the year 1748, the subject being a fourteen-year-old boy, both thighs of whom were gangrenous (the result of eating diseased rye). The right hip was first amputated and four days later the left hip was operated upon. The patient survived eleven days after the second operation. The first successful operation was performed by Perrault of St. Maure, in Touraine, in the year 1773, for gangrene of the thigh following injury. The first reported case in England occurred in 1774, the operation being performed by Mr. Kerr of Northampton, upon a girl of twelve years, for abscess at hip-joint, the patient surviving the operation eleven days. The first successful hip-joint operation in America occurred in the year 1846, in the hands of Dr. Walter Brashear, of Bardstown, Ky. From these early operations we proceed to the methods of Langenbeck, Guerin, and Malgaigne, and from these to the bloodless method of to-day, devised by Wyeth. The writer reports six cases, four for the result of violence to the thigh and joint, and two for tuberculosis; of this number two died, both belonging to the first series of cases; one, a ten-year-old boy with crush of thigh and joint, survived the operation seven days; the other, a man with crush of both thighs, requiring double hip-joint amputation, survived sixty hours. Three of his six cases were operated after the method of Wyeth.

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THE DIAGNOSTIC SIGNIFICANCE OF PUS IN THE URINE.

M. C. Millett in the November issue of the St. Paul Medical Journal says that large amounts of pus in the urine may mean but little to the patient and microscopical amounts may mean serious disease. A carefully taken subjective history with age, sex, and family history, may aid in arriving at a presumptive diagnosis. The search for the origin of the pus must begin at the meatus and proceed backward until we have found it or failed, and having failed, we have the privilege of trying again. The conditions in the male urethra and its adnexa causing pus to appear in the urine are to be eliminated by massage and irrigation; in the female urethra care is to be taken to prevent contamination from vaginal discharge; infected Skene's glands

are to be emptied by pressure and cleansed by irrigation, urine then to be obtained by voiding or catheterization. The most common causes of vesical pus are, cystitis, foreign body (stone), ulcers, and tumors; for the satisfactory detection of these the cystoscope is advised. Additional sources of bladder pus are pelvic suppurations, as those accompanying appendicitis, ovarian cysts, pyosalpinx, etc., which rupture into the bladder; the clinical history of the oncome will usually point to a proper diagnosis, which will be confirmed by the location of the fistular opening with the cystoscope. For the location of renal pus the use of the ureteral catheter and of some form of intra vesical segragator is advised. The author states that he has never catheterized the ureter, when he thought the kidney was good, in the presence of pus, and advises against such a procedure; he has catheterized the affected kidney, when the affected one was known, and leaving the ureteral catheter in place, irrigated the bladder and collected the urine coming from the other ureter into the bladder. Some form of an intra vesical separator avoids the possibility of carrying infection to a probably sound ureter and kidney. The two most common causes of renal pus can be positively diagnosed, tuberculosis, by the finding of the bacilli, and stone, by the X-ray. Cases of renal tuberculosis in which the bacilli can not be demonstrated are extremely rare, and in these other clinical evidences point to a diagnosis; "if you can say that a good X-ray plate does not show a stone, it means there is none". Pyelitis, from the nature of its etiology, is apt to be bilateral. Infection occurring through the circulation makes the condition especially liable to follow acute infectious diseases. Infection which is retrograde results from urinary stasis. The pressure of a tumor may be exerted upon one ureter only and produce a unilateral infection. Urethral and bladder conditions expose each ureter equally and favor double pyelitis. Morris and Douglas make especial mention of the pregnant uterus as a cause of obstruction.

SPECIAL ARTICLES.

INFANTILE CONVULSIONS.

While infantile convulsions are not a disease, but only a symptomatic evidence of some abnormal condition, yet there is no manifestation of disease in children so terrifying to the mother as convulsions.

This symptom occurs as a result of such a multiplicity of causes, and under such a va-

riety of circumstances, that a general study of the subject cannot fail to be of interest to us all. We are usually called in great haste to these cases and amid the great perturbation and confusion incident to this condition, it requires cool, discriminating judgment, and diagnostic ability on the part of the physician to adapt his therapeutics to the case.

The limits of this article prevent a discussion of some of the anatomical and physiological reasons so far as the infant's brain is concerned, as to why convulsions are so much more frequent in infantile than in adult life.

The nervous system is structurally not mature in infants, but is in process of rapid development.

Some children, or rather some families of children are peculiarly susceptible to convulsions; that is no doubt due to inherited neurotic tendencies.

Syphilis in one or both parents exerts an important influence in the production of convulsions.

Dentition has long been considered, (especially by the laity) to be an important factor in the causation of convulsions. I am of the opinion that dentition, *per se*, rarely if ever causes convulsions.

The exciting causes of convulsions are very many. It occurs as a symptom in nearly all cerebral diseases, in hypertrophy of the brain, thrombosis of the cranial sinuses, congestion of the brain, cerebral hemorrhage, in the various infections, especially whooping cough, scarlatina and the other exanthemata. It is caused by ptomaines, leucomaines, uremia, malaria, heat, cold, febrile states, burns, blood loss, fright, anger.

Intestinal parasites are perhaps the cause of convulsions in a limited number of cases.

The mysterious changes effected in the milk of the mother, as the result of violent emotion, such as fright, anger or grief have been known to cause convulsions.

Preputial adhesions and a narrow prepuce may cause convulsions.

The significance of convulsions in children depends upon many circumstances. We must consider the nature and extent of the cause in estimating the dangers resulting from convulsions. Convulsions occurring in the course of disease of the central nervous system usually indicate the approach of death.

Convulsions occurring in children of a markedly neurotic predisposition may mean little or nothing.

Convulsions occurring at the commencement of an eruptive fever generally subside without untoward results.

Convulsions during the first few days of life are very significant; frequently they are

an evidence of cerebral hemorrhage, or of arrested cerebral development, and may be followed by paralysis or mental impairment.

Convulsions in the early days of life should also lead the physician to think of the possibility of tetanus neonatorum.

In the treatment of convulsions we must of course take cognizance of the convulsive seizure first, and then the underlying cause.

J. T. REDDICK.

Paducah, Ky.

THE TREATMENT OF THE HYPERTROPHIED PROSTATE.

The advance in the treatment of this condition has been very marked in the past twelve years, since White in 1893 recommended castration for its relief, and no department of surgery has attracted more attention from the profession. When we consider the number of these unfortunate sufferers, we can only wonder why surgical relief has only recently been offered them. Formerly their comfort and lives as well, rested solely in the catheter, which was oftentimes a poor means of temporary relief, and more often the indirect cause of even greater distress, and finally of death. The catheter can only be considered as a palliative measure, yet when carefully employed it is one not devoid of merit. It will carry many cases, especially in the higher walks of life, through their expectancy in comparative comfort.

White (Annals of Surgery, December 1904) says: "Catheterism should be systematically employed in cases in which the quantity of residual urine is three or four ounces, or more, and in which the introduction of the instrument is easy and painless, and the urine is sterile." This will be accepted by the majority of the profession, but Parker Syme, in a paper before the American Medical Association, says: "When the obstruction requires the habitual use of the catheter the patient is safer to have a radical operation performed than to enter on, or to continue in the so-called catheter life." The weight of opinion is in favor of earlier operation before serious changes in the bladder wall, infection of its mucosa, and disease of the kidney have occurred.

The catheter fails to cure because it does not remove the obstruction to the venous return, a very important factor in the pathology.

Castration and vasectomy have been tried and discarded, although it is scarcely two years since Rovsing claimed sixty per cent. of cures from these methods. The Bottini operation proposed in 1874, revived by Trendelenburg in 1897, had a large following for a

time but has given way to the open operation, especially perineal prostatectomy. The objections to the Bottini method are, that the work is done entirely in the dark, that while opening the canal it quite fails in many cases to remove the mass obstructing the vesical veins, while the danger of hemorrhage and sepsis is even greater than in the open operation, as shown by its higher mortality; also, that it fails entirely where drainage is urgent.

Suprapubic prostatectomy, revived by English surgeons, especially Mr. Freyer, is especially applicable to the large adenomatous type of prostate and not the fibroid variety. Freyer claims that the cases should be carefully selected and operation rarely performed before the age of fifty-five. Under that age he thinks the cases are best managed by carefully conducted catheterization, and the operation only indicated when the catheter life has reached its limits. Deaver in this country takes a similar view.

The disadvantages of the suprapubic method are the prolonged confinement to bed, the imperfect drainage, and the dangers incident to operation, viz: anesthesia, hemorrhage, and sepsis. Up to July, 1904, Freyer had done 107 enucleations for adenomatous enlargement with 97 successes and 10 deaths, a mortality of nine per cent. He claims that four of the ten cases should not be charged to the operation. It is undoubtedly a fact that the suprapubic operation shows a slightly higher mortality than the perineal, but not sufficiently so to exclude it as a valuable procedure in certain selected cases. It appears to be indicated in cases complicated by serious vesical hemorrhage, a large stone, or a vesical diverticulum; also where the intravesical growth has reached large dimensions.

Freyer's report shows that, "In no instance has the patient failed to regain the power of voluntary micturition without the aid of a catheter. There has been no instance of a relapse of symptoms; on the contrary, lapse of time only seems to consolidate the cure. In no case has there been contraction at the seat of operation leading to stricture; nor has there been any instance of a permanent fistula resulting."

The perineal operation as now performed by Parker Syms, Goodfellow, Murphy, Young, and others of this country, shows a very low rate of mortality—four or five per cent—and is at present the operation of choice. Some of its defects are the development of epididymitis, the loss of sexual power, loss of sphincteric control of the bladder, the establishment of a permanent perineal fistula, and, in a few cases, the development of a rec-

tal fistula as a result of operative trauma, or pressure from a gauze pack.

In a recent paper presented to the Southern Surgical and Gynecological Society, Young records 75 cases with a total of 3 deaths from all causes. He claims to avoid many of the objectionable sequelae of the perineal operation by invading the gland by an incision through the capsule some distance away from the median line, and nearly parallel with it. He says that in this way the secretory structures are not damaged, the urethra having been opened just back of the bulb and the floor of the prostatic portion left undisturbed, and that epididymitis is thus avoided. The latter condition occurs so frequently that Albarran recommends vasectomy immediately after perineal enucleation, for its prevention. Young also claims, and with reason, that the control of the bladder is unimpaired. He operates upon these patients under spinal analgesia and has them out of bed in three or four days. In about eight days the urine passes through the urethra in a natural way. In Young's operation large growths of the middle lobe, and large culculi, can be removed through one of the lateral openings.

We therefore can offer these patients palliation by the catheter, or radical operation by the suprapubic or perineal route, as seems best adapted to the individual case, and can show for the operation a mortality scarcely greater than that resulting from palliative measures.

J. GARLAND SHERRILL, M. D.,
Louisville, Ky.

A PLEA FOR MORE CARE IN THE DIAGNOSIS AND TREATMENT OF CHRONIC BRIGHT'S DISEASE.

It is the every day experience of the general practitioner who uses the microscope to find hyaline and granular casts in the urine of a large number of his patients, who complain of no symptoms of chronic interstitial nephritis. Indeed it seems that there are few in this age of strenuous life and highly nitrogenous diet who have passed the age of forty-five, whose urine after careful examination by means of a centrifuge and small pipette, does not at sometime show casts and often a faint trace of albumen.

Acquainting the proper man with its probable significance often proves salutary; but if a mistake be made in the patient, we may have, from consequent despondency, melancholia to treat instead.

This has inspired this article which its au-

thor offers as a plea for consideration of all of the factors, and of other diseased organs in any given case, and for treatment of the patient, not the name of one symptom.

There is probably little doubt that these are cases of latent interstitial nephritis; but because there are other accompanying diseases that are more important for consideration, and because these patients often live as long as the average and die of inter-current diseases, they *practically* are not Bright's.

For the diagnosis, we should require the *symptom complex* of persistent large quantity of low gravity urine containing a trace of albumen and pale granular or hyaline casts, though fatty granular are considered most pathognomonic; and such symptoms as weariness, dyspepsia, dizziness, nausea, headaches, slight oedema of ankles, high arterial tension, delirium, convulsions. Any of these may be absent, but the diagnosis should not be made from casts alone, nor any other one symptom.

We should consider well the allied arteriosclerotic and visceral diseases found accompanying the renal lesion, or at least in which casts are found in the urine, such as myocarditis, endocarditis, cirrhosis of the liver, chronic gastritis with atrophied tubules, asthma, emphysema, bronchitis and brown induration of the lung, pernicious anemia; and should decide in the given case which lesion is deserving of chief consideration at the time.

The asthmatic may need treatment chiefly for his lung condition. The cirrhotic liver, like most other accompanying diseases, will probably be taken care of by the proper regimen for Bright's, but most by abstinence from alcohol and hepatic irritants. Endocarditis is often most benefitted by restriction of fluids, purgation and rest in bed, instead of by gadding about springs and cures, surcharging the blood vessels with fluids. A prolonged milk diet followed by restriction of diet usually benefits all of the cases under consideration, but too long deprivation may do serious damage in myocarditis and degenerated arteries where eggs, nutritious meats and other nourishment should be insisted upon.

C. G. DAUGHERTY.

Paris, Ky.

THE NEGLECTED LYMPH STREAM.

The relations of the lymphatic system to nutrition, tissue waste, and to certain pathological conditions, not often correctly described, seem to need further discussion.

Senator and Marchand, guided by the studies of Frey, in his histo-chemistry of man, demonstrated the fact that certain foods representing saccharose, and some glucose, de-

veloped abnormal activity in the leucocytes, causing them to seek a peripheral position in the small vessels, where inordinate rapidity of multiplication takes place, associated with great increase in the number of wandering cells in the intervascular spaces, and presently augmentation in the volume of the lymph stream.

As the lymphatic vessels abound in the pleura, the pericardium, and the interthecal spaces of the great vessels and nerve trunks, including the intermeningeal spaces of the brain and cord, it is easy to comprehend why abnormal increase of the volume of the lymph stream depresses every vital function.

Kellogg has found that a roasted apple is digested, and enters the blood stream, within an hour after digestion. Senator and Marchand found that pure crystallized saccharose is but slightly altered by the digestive fluids, that it is dissolved, however, and quickly enters the blood stream; following which, it was found, in dogs, the greatest activity in the multiplication of leucocytes occurred in those where pure saccharose had entered the blood stream. Proliferation of cells after prolonged ingestion of saccharose continues during their passage into and through the lymph channels.

Krause and Ziegler have shown that air dusts, inhaled by persons during the period of active cell migration from the blood stream to the lymph channels, quickly enter from mucous surfaces and are seized by the wandering cells in the intervascular spaces and carried into the lymph stream. Insoluble particles of foreign matter thus introduced are sometimes sufficient to irritate the lymphatic glands, producing painful swelling. It is too often the custom of physicians to attempt the correction of these conditions by the use of drugs, permitting, at the same time, the patient to go on using as foods those substances which augment the lymph stream, thus facilitating the introduction of foreign matter, and often infectious disease.

If saccharose and the glucose types of food develop general languor in some, lymphatic engorgements causing local disturbances in others, and various forms of dyspepsia in still another class of persons, it would seem rational, having determined the cause of these derangements, to remove it, and thus correct that, rather than to seek the antidotal effects of medicinal agencies.

In persons with superabundance of lymph such infections as variola, scarlatina, measles, and syphilis, become virulent, whilst those with no more than the normal volume in the lymph stream, have comparatively mild forms of these infections. The question has been

raised as to whether increased volume in the lymph stream may not arise as well from the multiplication of the wandering cells, and of the lymph corpuscles in their passage through the lymphatic glands, and by the accretions of tissue waste, as from the abnormal multiplication of leucocytes in the blood stream.

It is a curious fact that the lymph plasma exercises a certain digestive power on the debris of microbes, red blood corpuscles, and iron granules. The centrosomes of leucocytes afford a curious and interesting study in their variable susceptibilities to aniline dyes in neutral, acid, or alkaline solution. Special digestive ferments have not yet been differentiated in lymph, but they undoubtedly exist.

Metchnikoff concludes that those white corpuscles which have no granules, have a well marked power of digestion of tissue waste, while those which appear to possess soluble ferments are capable of digesting even red blood corpuscles.

Tissue metabolism is, therefore, largely dependent upon the character of the leucocytes in the blood, as well as upon normal condition of the lymphatic system, and is always influenced in its activity by the character of food taken, some forms of food promoting accretion of cells of building force, and some others, those of cumulative tendency, resulting in inhibiting effects upon the vital functions in general.

Suppose the lymph stream is augmented suddenly in a person with insufficiently active eliminating functions, autotoxaemia may bring on general neurasthenia, with serious disturbances of the special senses. Such cases are of common occurrence, and, without any attempt to discover the cause, the patient is subjected to all sorts of medication, baths, electricity, change of climate, and finally the rest cure, without benefit.

DUDLEY S. REYNOLDS.

ANTISTREPTOCOCCUS SERUM.

Though a difference of opinion exists among scientific investigators as to the mode of action of antistreptococcus serum on streptococcus infection, and the experiences of clinicians vary as to results, yet the general consensus of opinion among those who have used it in appropriate cases is that it is a remedy of great value and destined to reach many cases that heretofore were beyond remedial agency.

Its power to counteract or destroy the toxic poison in puerperal and scarlet fever, erysipelas or infected wounds, has been undoubtedly demonstrated by abundant clinical experience.

The serum is probably not a true antitoxine in the sense that diphtheritic serum is used; but rather a reinforcement of the natural defensive processes of the body; in that a condition of phagocytosis is produced by it and the leucocytes destroy the streptococci.

The best results can only be attained by this serum: 1st. When the unmixed streptococcus infection prevails. 2nd. When used early before the case is too far advanced. 3rd. When it is used in sufficient doses. The writer's experience with this serum has been limited to two cases of infected wounds. The results in these cases were remarkably convincing.

R. C. M'CHORD.

Lebanon, Ky.

GENERAL NEWS.

Dr. Edwin Ricketts, of Cincinnati.—We learn that Dr. Ricketts was recently operated upon at the Good Samaritan Annex by Dr. Charles A. L. Reed for umbilical hernia. We are glad to learn further that Dr. Ricketts has had a rapid recovery and is now able to go on with his professional work. We feel that our gratification will be shared by Dr. Rickett's multitude of friends in the profession.—*New York Medical Journal*, Dec. 10, 1904.

National Society for the Prevention of Dust.—A number of prominent physicians in the United States is advocating the organization of a national society for the prevention of dust. It is believed the matter can be gotten under way by the time of the next meeting of the American Medical Association, when it is probable organization will be effected.

Ohio State Laboratory.—The Ohio State Board of Health will soon throw open its laboratory, chemical and bacteriological, at Columbus, to all the certified physicians of the State. Now only samples submitted through the health boards are accepted and worked out by the department. There is some apprehension that the laboratory may be overwhelmed with work, but if such proves to be the case the Legislature will probably provide means for a larger force.

Oriental Drugs.—The United States General Appraisers have recognized, officially, the medicinal virtues of dried lizards, which are in high repute among the Celestial residents of this country. Hing Lum Chon imported some of the lizards, and Collector Stranahan classified them as a medicinal preparation. Hing Lum Chon protested, and carried the case to the Board of General Appraisers. They confirmed the classification, and thus upheld Mr. Stranahan's title as an expert in the Chinese pharmacopœia.—*The Sun*.

War on Smallpox.—Dr. Benjamin Lee, secretary of the State Board of Health of Pennsylvania in his annual report to the board, declares the recent smallpox epidemic has demonstrated the necessity of a State law making vaccination compulsory. As opposed to 5,172 cases of smallpox and 521 deaths, which occurred in this State in the year ending November 1, last, he says the experience of the German army in this respect cannot be disregarded or explained away, not a single death having occurred from smallpox in that body since vaccination and revaccination were made compulsory 30 years ago.—*Amer. Med.*, Dec. 3, 1904.

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Hospital Staff Not to be Placed Under Civil Service Rule.—In *American Medicine* of November 26, editorial mention was made of the fact that the officers of Cook county, Ill., had decided to hold medical examinations for appointments to hospital vacancies. More recent news from Chicago, however, states that the county board on November 25, rescinded its action, and it appears at the present time that the affair is in a very unsettled state with a probable defeat of the civil service examination as a result.

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Sanitation in Cuba.—President Palma has definitely announced that he is not willing to undertake the street cleaning of the Eastern cities of Cuba without the authority of Congress and without funds for that purpose, but he is urging the matter on the leaders of Congress, and early action is expected. The newspapers unanimously urge that Congress take action in the matter and not furnish a reason for intervention on the part of the United States. The Health Department does not belittle the neglected condition of the streets in some towns, but points out that the death rate is decreasing throughout the island.—*Amer. Med.* Dec. 3, 1904.

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German Tuberculosis Commission.—The imperial commission appointed to investigate the relations between human and bovine tuberculosis met on November 25. Dr. Weber, one of the members of the commission, reported that the investigations made showed that human and bovine bacilli were absolutely distinct biologically, and that one never develops or changes into the other. Several cases of mixed infection with both organisms in man were reported and the commission urges the exercise of all possible precautions to prevent infection with the bovine bacillus.—*Medical Record*, Dec. 3, 1904.

KENTUCKY MEDICAL JOURNAL.

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SPECIAL ISSUE OF THE KENTUCKY MEDICAL JOURNAL.

The March issue of the *Kentucky Medical Journal* will be devoted entirely to State Medicine and questions of sanitation and hygiene. The prevalence of smallpox, both in Kentucky and adjoining States at the present time, the more or less continued presence of the various contagious diseases, the ignorance of the general public in regard to the importance of vaccination and matters of general sanitation and hygiene—all of these things make it worth while to devote a whole issue exclusively to the discussion of these subjects. Short, crisp papers will be contributed by men particularly adapted for the discussion of these questions, and the issue will be so complete that it will serve as a reference book for physicians throughout the State, who will put it aside and preserve it for reference when any question of sanitation or contagion comes up. The issue will be sufficiently large to send a copy to every doctor in the State of Kentucky, to both members and non members of the State Association; also to all County Judges and County Clerks.

ANNUAL REPORTS OF COUNTY SOCIETIES.

County societies will bear in mind the changes adopted by the House of Delegates of the State Association at the meeting in Lexington last year. It was provided that the annual meeting shall hereafter take place the first week in October, instead of in the spring as heretofore. The time for report of the county society with remittance for membership was changed from April 1st, to July 1st. Of course, reports and remittances from the county societies can be sent in any time after the respective annual meetings, but in

no event can reports be delayed later than July 1st.

THE PATENT NOSTRUM NUISANCE; HOW CAN WE ELIMINATE IT?

In his address before the section on *Materia Medica* of the American Medical Association at Atlantic City, Dr. Osborne treated in a masterly way the scourge of nostrums and irregular practitioners. He laid bare in a most convincing way the dangers of the nostrum and the fraudulent methods of the irregular and showed the urgent need of concerted action by the medical profession to protect the laymen against these evils. Lest his warning be forgotten, the medical press should agitate the question until some tangible plan is formulated to eradicate or control this scourge on humanity. There is one class of nostrums which causes the physician more annoyance and perplexity than any other; this is the class which claims to be "infallible" in the cure of fatal chronic diseases, especially chronic nephritis, consumption and locomotor ataxia. In these diseases the physician can offer in most cases but little hope; maybe a little longer to live, amelioration of distressing symptoms and an easy death. On the other hand the nostrum guarantees a cure and backs up its guarantee with sworn testimonials of cures of cases pronounced hopeless by regular physicians. In addition, there are often friends of the patient who know of exactly similar cases cured by the nostrum. It is but human for the invalid you have doomed to be tempted by such an offer, and if you find the temptation has been too great, it is your duty to save the patient from the evil consequences that might result from the use of the nostrum. In your efforts to dissuade the patient from using the nostrum, you may be compelled to admit you know nothing of it and that the evidence submitted in its favor appears on its face indisputable. You can offer no proof that the evidence is not genuine. The only statement you can make for your opposition is that it is a nostrum and is therefore a fraud.

This reason is not at all convincing and your opposition to this special nostrum appears to the patient due to prejudice alone; and one who will allow that to deprive an invalid of a chance for life and health, is looked upon as narrow. In this country of liberty, the physician does not enjoy the absolute control of his patient, which his German confrere has; his advice is open to criticism by the layman and not infrequently the layman assumes the role of consultant. Therefore, when we find our patient a victim of the nostrum, a command is not sufficient; we are

called upon for reasons, and our condemnation of any special nostrum, of which we are confessedly ignorant, places us in the position of passing judgment without weighing the evidence, so that we may have to surrender the patient entirely to the nostrum and retire from the case. Either this, or we may treat the patient as we would a refractory child and not desert him or refuse our aid, but stick by him and protect him, as far as possible, from his folly, showing him by practical demonstration that the claims of the nostrum are false. This last course permits the physician to fulfill his duty as a humanitarian and has the advantage of making him, instead of the layman, the judge of the effects produced by the nostrum; and the knowledge gained by his observations will be of great value to the medical profession, because it will relieve it of having to condemn the nostrum simply because it is a nostrum. This policy of toleration is suggested only in those cases where you must admit you cannot show the nostrum is a fraud and in which you must tolerate it or desert your patient.

We must recognize the fact that there are some nostrums which are not without merit; not a few have their origin in the favorite prescription of some successful doctor, and if quality has not been sacrificed for gain, they may be valuable preparations when used intelligently, which, however, is hardly possible as used by the layman. I would suggest as remedies against this evil a modification of our unreasoning opposition to all nostrums, especially in our dealing with the layman, simply because they are nostrums; a more thorough education of the physician and national legislation. Our apparent condemnation of each and every nostrum without weighing the evidence in its favor, appears to the layman unjust and an evidence of narrowness and prejudice. I believe we can do more toward checking the evil by a policy of liberality and toleration in certain cases. It is an old saying, and an apt one, that we must even "give the devil his dues." Not deserting your patient if he persists in using a nostrum, must not be considered a compromise with dishonor, but rather as doing your duty to your patient and sacrificing your own interests by not deserting him when entangled in the coils of the nostrum. If the nostrum is as dangerous as we paint it, until we can suppress it why must we refuse to lend a helping hand to those captured by it and thus raise the nostrum to the dignity of a successful competitor?

Rather let us consider it a parasite, and if we cannot rid our patient of it at the first blow, keep on hitting until we do. We must

endeavor to eliminate the errors of physicians, especially those of diagnosis, by requiring greater proficiency for graduation, since such errors provide the nostrum vendor with his most effective argument. The sworn testimony of cures of fatal maladies, after having been diagnosed as such by physicians, are made possible only by physicians mistaking, ignorantly or carelessly, a functional derangement for an organic lesion.

In seeking the most effective form of legislation, we must search for the facts that are chiefly instrumental in the success of the nostrum.

Two factors—secret formulae and advertising—if it were possible to control or eliminate, would practically check the nuisance.

The national government should require the registration in its hands of the formulae of all nostrums; it should provide facilities for analyzing these products as found in the market, and it should be given power to pass judgment upon and suppress all fraudulent and harmful ones.

In addition, the information thus secured should be given wide publicity and the formulae should be required on each and every package that is placed on the market. It is difficult to determine how advertising of the nostrum should be regulated. The country newspaper is the nostrum's most effective medium, and can hardly be expected to take the high moral stand which is taken by some of the higher class magazines, which refuse to accept this class of advertising. Legislative restrictions, however, are needed to prevent what is practically the aiding in the obtaining of money by false pretenses. The Hepburn bill, which will come before the next Congress, is a step in the right direction, but it is not broad enough in its scope to materially check the evil effects of the nostrum. A condition devoutly to be hoped for in this country, is that found in Sweden, where by legislation the nostrum is effectually banished from the country.

ORVILLE A. KENNEDY, M. D.
Louisville, Ky.

ONLY ONE KIND OF MEMBER IN THE STATE ASSOCIATION AND COUNTY SOCIETY.

The question as to whether county societies can have two kinds of members, one in affiliation with the State Association and the other not in affiliation but regarded as an associate member of the county society, still continues to bob up occasionally in one section or another of the State, although we are happy to say that it has been definitely and satisfac-

torily settled already for most of the counties in which the question has been raised at all. It is one of the questions which has come to us as a legacy from the past, from the time when the county societies existed independently of each other and of the parent organization, and each member of the county society, acting as an independent unit, joined the State Association or remained out of it as he saw fit. So it came to pass that, when the new plan of organization was adopted by the Kentucky State Medical Association, and following this county societies were organized under the new plan in a great majority of the counties in the State, very soon this question began to be raised, especially in those counties where a previous county organization had been in existence. In counties where no such organization existed already, this troublesome question never arose at all, because the organization plan proposed by the State Association, elaborated to the respective counties by the chosen organizers of the State Association, the Councillors of the respective districts, was accepted with understanding and without mental reservations by the new organizations. In some of the counties where county societies previously existed, some of the members were inclined to make objection, on the ground that such action by the State Association was dictatorial compulsion and that each county should have the privilege of determining for itself exactly what its membership should be, whether affiliating or non-affiliating with the State Association.

The constitution of the State Association is very plain on this point, it being fully recognized by the propounders of that document that organization in the State could never be effective unless the plan proposed was rigidly adhered to, namely, that on joining a county organization a physician at the same time necessarily entered into affiliation with the State organization. Any other plan would have been futile and would not have been of a nature to justify the effort which has been put into this movement of reorganization of the medical profession.

The Kentucky State Medical Association has been unfortunate in that some of its officers at first did not thoroughly appreciate the scope of the plan of reorganization, and further, in that others of its officers have not felt themselves called upon to support the plan of organization adopted by the State Association, but have shown an inclination to spread disaffection, on the ground that the State Association has established in effect a most offensive dictatorialism. We are happy to say that in every instance where the matter has been thoroughly understood, and

where the State and county officers have upheld stoutly and firmly the principles of the adopted constitution, all of these questions have been settled definitely and amicably.

In order to define once and for all the intention of the model state constitution, such as was adopted by the Kentucky Association when reorganization was effected, Dr. John G. Cecil, Chairman of the Kentucky Council, has written a letter to Dr. George H. Simmons, secretary of the American Medical Association and one of the Reorganization Committee which was responsible for the constitution which has been adopted now by a great majority of all the States of the Union. Appended is the reply of Dr. Simmons, and it is to be hoped that this will result in definitely disposing of all such contentions for the future. Just so long as the subject is considered open for discussion, just so long will a certain number of men be found who will refuse to join the State Association but will still maintain the right of the privilege of membership in the county organization.

Office General Secretary, American Medical Association, 103 Dearborn St., Chicago, Jan. 4, 1905.—Dr. John G. Cecil, Louisville, Ky.—My Dear Doctor:—Yours of Dec. 29th has been received. In this you ask whether “a component county society can have two kinds of members, one in affiliation with the State association and the other not in affiliation.” No.

When the present plan of organization was proposed, it was recognized that objections would be made by two classes, and this proved to be true. One lot of men objected because they wanted to belong to the state association and not to the county society. On the other hand, others desired membership in the county society and not in the state association.

The argument advanced by the former was that they were too good to associate with the kind of men who lived in their community; they did not put it in these words, but this is what it amounted to. The only argument offered by those who did not want to belong to the state association, but did wish to affiliate with their local body, was that, as they could not, or would not attend the meetings of the state association, they did not want to pay their share of the expenses. This is the only objection, and it is certainly an extremely selfish one. As a reply, let me say:

1. The expenses connected with the scientific meetings of the state association are practically nil. What money is spent is used for the good of the profession of the whole state.

2. The annual session of the state associ-

ation, using the name in its broad sense, is a gathering together—a convention—of the members of the component county societies of the state. Every member of a county society is a member of the state association in the sense that he has a right to attend and take part in the scientific and social functions of the annual session. In this sense every member of a component county society is a member of the state association, but in no other.

3. The old idea of membership in a state association no longer prevails. Actually and technically, the House of Delegates is the state association. This can not be too strongly emphasized. It is the business and the legislative body of the organized profession of the state; it contracts and authorizes the payment of debts, etc. Its members are elected to represent and act for the members of the component county societies. They are the members of the state association.

Bearing the above in mind, what kind of a member would “associate or non-affiliated member” be? As far as I can see, he would be one who would be so penurious as to be unwilling to pay his share of the expenses—\$2.00 a year, isn't it, in Kentucky?—for carrying on the work in the state. You certainly have no such men in Kentucky. I have met lots of Kentuckians, but not one among them belongs to this class.

Provision can be made for taking in as associate members pharmacists, chemists, dentists, etc.,—those connected with the allied sciences—with the right to take part in the scientific and social functions only. Aside from this, there can be no half-way members in our organization, any more than there can be half-way Masons, affiliated Methodists, or associate Presbyterians. A man is either for us or against us—he is either a member, or he is not.

Congratulating you and the other workers in your state on the excellent results already obtained, and wishing you a prosperous new year, I remain,

Respectfully yours,
GEORGE H. SIMMONS.

SOME THOUGHTS WITH REFERENCE TO MEDICAL EXAMINATION FOR LIFE INSURANCE.

Life insurance is a laudable business, the magnitude of which can hardly be conceived; yet the business is rapidly increasing from day to day. With the stability of the business the medical profession has much to do; however, this pertinent question presents itself for our consideration: Are the rank and file of

the medical profession fully alive to the vastness and the importance of this field of labor, and do all life insurance companies properly appreciate the services rendered them by the science of medicine?

As in every other line of study, so in this, the higher the attainment the broader the horizon and the greater the effort required to paint the rugged as well as the beautiful parts of the whole landscape.

Formerly the work of the medical examiner was little more than catechetical, now it is the study of man in his entirety.

Life insurance has helped to lead us to the ascertaining of those characteristics of which the perfect man consists. It may be stated, that a perfect man is a man with a family history that is free from any hereditary taint or tendency for any form of disease, and whose ancestry was long lived. His personal characteristics must be unassailable, his morals, at least with reference to the care of his body and mind, should be of a high order, his ideals should be of the most elevating type. His mental faculties should be thoroughly alive to the prerequisites for the attainment and maintenance of the highest physical development, which is found to be uniform in its make-up, neither too low nor too tall, nor too lean, nor yet burdened with corpulency. His body must be erect, muscular, well rounded and complete in all its parts. There must be no lingering trace or impression left on him as a reminder of some former illness or injury. His circulatory, respiratory and nervous systems, his digestive, assimilative, eliminative and generative organs must, individually and collectively, be normally active and in perfect accord one with the other.

This "Perfect Man" should be the ideal or measure by which every applicant is tested, that the insurance company may know where to place him in the schedule of risks. The physician in order to perform this task properly and with credit to himself, and to the best interest and satisfaction to the company requesting it, must be a man of good native judgment, reinforced by a liberal education, especially in all those branches which may give him a well defined concept of what is required to constitute what we have termed a "Perfect Man." The examiner who undertakes to do this work should be duly familiar with the make-up of this ideal man. He is expected to recognize any deviation from the normal in the condition or action of the various parts of the body. He must not only recognize the deviation, but must also be able to estimate the extent of variation and the ultimate result of same on the body. In order to do this, the cause of the variation must be as-

certained, also whether that cause is transient or permanent in its nature. This information can not be obtained by a casual observation of the applicant and a mere notation of his answers to the questions laid down in the examination blanks of the insurance companies. Frequently numerous additional questions must be put to the subject of examination before we can get the true condition of some very important organ. Repeated examinations of the same subject often have to be made before we are prepared to give an opinion of the risk to the insurance company. Only by a careful study of the duties of the medical examiner of to-day can there be obtained any just conception of the labor required of him, or the magnitude of the responsibility resting on him. He it is who stands as a safe-guard over the financial interests of the life insurance companies. By carelessness or lack of skill he may either deprive the company of a desirable risk and a worthy applicant of the advantages of the protection, or he may permit a rascal in the capacity of agent or applicant, or, as some times happens, both, to perpetrate a base fraud on the company whose interests he is paid to protect. The importance of the work required of us should appeal to us as individuals of honor and just pride, to exert our every energy to be fully prepared for the fulfillment of every obligation in this line of work.

In view of the outlay of labor, time and money necessary to qualify and equip us for making these examinations; in view of the fact, that we are expected to hold ourselves in readiness to do this work promptly, often to the neglect of other professional duties; and in view of the thoroughness with which the work must be done, it is the opinion of the writer that a minimum fee of less than five dollars for an examination should be spurned by the examiner as an insult to himself and to the great profession to which he belongs.. It is to the financial interest of the insurance company to pay full value for this work, and if an examiner from any cause proves to be unsatisfactory to the company, let his services be dispensed with; that will act as an incentive for such characters to do more efficient work.

Every physician in Carlisle county is in full accord as to compensation for this work, and consequently all those companies paying a less fee than mentioned above, are barred from doing business in the county unless they import an examiner from another county to do the examining for them. This understanding among the profession of this county applies to fraternal as well as all other companies.

It has occurred to me that, if possible, there

should be a more intimate relation between the examiner and the Medical Director; perhaps it would help to keep the examiner mindful of the fact that he is in the employ of the insurance company instead of the agent or applicant, as it sometimes appears. A more frequent and liberal discussion of these subjects of mutual interest to life insurance companies and the medical examiner will beget in us all a more earnest desire to attain a greater degree of efficiency and a stronger feeling of unity.

J. M. PECK.

Arlington, Ky.

DISTRICT MEDICAL SOCIETIES.

There are in the State of Kentucky a number of District Medical Societies, the greater number of which are doing most excellent work, as will be evidenced by a glance at their scientific programmes.

They also do a work, scarcely less in importance, of a social nature, by bringing together the various physicians of a section of the State, whereby they become better acquainted and by an exchange of experiences they grow to know each other better, and to sympathize, when before they were inclined to criticise. So far, this is all well and as it should be; but are these societies properly organized, and are they working with a purpose, the object of which should be the very best good for the medical profession, as a whole, in our State?

On the contrary, are they not free lances, so to speak, owing allegiance to no higher organization, and in some instances at least, with no reference to the general plan of reorganization, to which we are at present so wedded.

In order to more fully set forth the objects of this paper, will state that its author has had the pleasure of visiting a number of these district societies, and with no intent to harshly criticise, yet we must confess there was a notable lack of discrimination in the reception of new members.

In two instances which I now recall, there was no Board of Censors, and the method of procedure was as follows:

Just before adjournment, the President of the Society announced that, "we will now proceed to the election of new members." Various names were suggested by the different members, the Secretary taking them down as announced, and then a vote being called for on the whole bunch, they were duly elected; this being done with no reference to, or inquiring into, their professional standing at home.

Now we claim that this is all wrong; that

the same care should be observed in these Societies as is observed in County Societies; that a rigid Board of Censors should inquire into, and pass upon each applicant.

In other words if a man is unfit for membership in his County Society, he is equally unfit for membership in a district Society, as is also true in the State Association.

Dr. J. N. McCormack, in a well written article on the subject of reorganization, says, "the County Society should be made the unit for everything above it."

Would it not be best to make the district society a link in the chain, beginning with the County Society and ending in the National Association?

Make the Constitution and By-Laws of all practically the same, so that a membership in any of these organizations would be a badge of good standing at home.

Just how this may be brought about is a question the details of which I shall not at present attempt to solve, but one which it is hoped the House of Delegates will take up at the next meeting of the Association. Why would it not be feasible to make the district society a component part of the State Association, very much after the manner which has been suggested, to make the Mississippi Valley Medical Association a section or division of the National Association?

However, these are mere suggestions or hints, and not an attempt at definite solution. But we do believe that a district society should owe allegiance to some higher medical organization, and that the same rules should govern its organization and conduct which apply to the organization and conduct of a County Society.

W. B. MCCLURE.

KENTUCKY NOTES.

Dr. William R. Blue and family have gone to Naples, Florida, for a month's stay.

Dr. D. O. Polin, of Washington county, died at his home in Springfield on January 14th.

Dr. W. D. Powell, of Harrodsburg, Kentucky, was thrown from his buggy on January 13th, sustaining painful though not fatal injuries. The clavical and three ribs were fractured.

Dr. William Bailey, of Louisville, and Dr. J. N. McCormack, of Bowling Green, Kentucky, have just returned from Havana, Cuba, where they have been in attendance on

the Americal Public Health Association.

KENTUCKY'S LUNACY LAWS.

Editor Kentucky Medical Journal:

I am very much impressed with the existing condition of our lunacy laws, and think it time the profession should take some action towards placing before our lawmakers some more humane and civilized way of committing the unfortunates to our State institutions, and at the same time so regulate these institutions as to keep them out of the degrading influence of politics.

I am convinced if you can have some one as a member of the House of Delegates, who feels interested in this matter, write to every State and have their delegates bring a copy of State Law as to the mode of commitment of insane, the House of Delegates can formulate some recommendation to the Legislature, Assembly and House on improved condition of lunacy law, you will be surprised how far behind our State Law is, and how little the profession has to do in these matters compared to New York, Ohio, Massachusetts and other States.

Don't pass this matter as of little consequence. I will gladly aid you in anything you may direct.

Respectfully,
H. P. SIGHTS.

Paducah, Ky.

WARNING AGAINST SMALL-POX.

Office of the State Board of Health.

Bowling Green, Ky., Nov. 20, 1904.

To the Health Officials, Physicians, and People of Kentucky:

Since January, 1898, small-pox has prevailed, more or less extensively, in every county in Kentucky, with a total of over 25,000 cases and 300 deaths, and costing in cash more than one-half million dollars, besides an estimated loss from interference with business and travel of something over one and one-half million dollars. Properly expended, this sum would have been more than enough to have guarded the health interests of our people for a generation, besides keeping every resident of the State vaccinated so that the existence of anything but an imported case of small-pox would have been impossible.

With the advent of cold weather, cases of the disease are being reported in widely separated sections in many counties, and we feel that it is again our duty to warn our officials and people of the necessity of prompt action to prevent serious and expensive outbreaks. Fortunately, the prevention of this disease is as certain and safe as it is cheap and easy,

and although it is unlawful to remain unvaccinated at any time, in the face of existing conditions intelligent people should not wait for the law to force them to evident duty. Vaccination and re-vaccination, properly done with reliable virus, is a sure preventive, and is entirely free from danger. It should always be done by a competent physician, with clean hands and instruments, at three points, at least an inch apart, on a well-cleaned arm, and should dry thoroughly before the sleeve is drawn down. Fresh, reliable virus can be procured, but it is difficult to keep it active, and the Board prefers and recommends the use of humanized virus, especially in the country where the family physician can select it himself from the arms of healthy children and young girls. It is certain to take, causes less soreness, and is believed to give better and longer protection. If the scabs are wrapped in tissue paper, sealed up and put in a dry cool place, they can be kept almost indefinitely.

Physicians everywhere should be on their guard and should isolate the first case and vaccinate all exposed at once. Grown people almost never have chicken-pox. When unvaccinated, grown people have a contagious eruptive disease, under existing circumstances they should be isolated and treated as suspicious until the health authorities decide it is not small-pox. All should remember that there are no such diseases as "elephant itch," "African itch," "army itch," "cedar itch," or "Cuban itch," and these are "nigger" names for small-pox. Every person in the State who has not already been vaccinated should be so at once, and the ignorant or negligent should be compelled to protect themselves, for the benefit of their communities, by the proper authorities. The laws on this subject are ample and sufficient, and whenever small-pox spreads in any community it is the fault of the health or fiscal officials and should be charged to them. In preventing the spread of this horrible disease this Board asks and expects the support of all intelligent people. Copies of circulars, describing the modern methods of preventing this and other contagious diseases, may be had free of expense upon application to the Board at Bowling Green.

By order of the Board.

J. M. MATHEWS, M. D.,
President.

J. N. McCORMACK, M. D.,
Secretary.

IN MEMORIAM, DR. A. G. BLINCOE.

A. G. Blincoe, A. M., M. D., died at his home in Bardstown on December 10, 1904, of appendicitis, after three days' illness. Dr. Blincoe was born on September 11th, 1844, at Manton, Washington county, Kentucky. His father was Dr. Thomas J. Blincoe, and at the time of the birth of his son was a very distinguished physician. Dr. Blincoe was educated at St. Mary's College, from which institution he joined Bragg's army in 1861, at the age of seventeen. He served through the war and was recognized by his comrades in arms as a brave and courageous soldier. At the close of the war he returned home to Manton and read medicine with his father. He entered the University of Louisville in 1866 and pushed his studies until he graduated in March, 1868, with the highest honors of his class. One complimentary remark made about his ability at that time might be inserted here. The late Dr. Coleman Rogers was quiz-master in "Practice" at that time, and he was heard to say that he "feared to ask Blincoe a question, lest Blincoe might know more than he." Dr. Blincoe maintained this high standing in his professional knowledge to his death.

After he graduated he located at Loretto, in Marion county. In 1875 he was appointed resident physician and teacher at St. Mary's College, which position he occupied until 1877, when he located at Lebanon, Ky. In a short time he was led to believe that the South offered him better opportunities than Kentucky did and he removed to Atlanta, Georgia, and formed a partnership with Dr. O'Bryan, of that city. The climate did not agree with him and in 1883 he returned to Kentucky and located at Loretto. In 1894 he removed to Bardstown where he soon built up a good practice.

During his professional life he several times took a post-graduate course of from a few weeks to a few months duration. Being of a mathematical turn of mind he gave the eye and eye defects considerable study, and finally, in 1887, went to New York and took a long course in the eye diseases. He pushed this specialty and repeated his visits to New York and Chicago until he became very proficient in this branch of science, to which he contributed several valuable papers. One of these, a paper on "Eye Strain as the Cause of Many Obscure Nerve Manifestations," made for him almost a world-wide reputation. This paper was published in Berlin.

Dr. Blincoe was a great student and sought always to elevate his profession. He was an active medical society worker. At the time of his death he was a member of the Nelson

County Medical Society and delegate from it to the State Medical Association, or member of the House of Delegates; was Medical Referee for the State Board in Nelson County; was a member of the Brashear and Muldraugh Hill Medical Societies; also a member of the Kentucky State Medical and the American Medical Associations.

In 1872 he was married to Miss Jane Spalding, of Marion county who with ten children, six daughters and four sons survives him.

Dr. Blincoe did a great deal of charity practice and for that reason did not succeed in laying up a fortune, but by judicious management and by wise judgment he provided for a rainy day for his family by carrying a good share of life insurance.

May his soul rest in eternal happiness.

HUGH D. RODMAN.

HYOSCIN IN THE TREATMENT OF MORPHINISM.

J. M. Buchanan, in treating the morphine habit, advises the administration of hyoscin, .3mg. (1-200 gr.) at first, the dose being gradually increased to .6mg. (1-100 gr.) At first the patient sleeps but in 12 hours a mild delirium sets in, which disappears a few hours after the drug is discontinued. He states that he has never seen any bad after-effects from its use. Calomel is given before the administration of the hyoscin, and the usual morning dose of morphine is allowed. When the patient asks for the afternoon dose, hyoscin is substituted, and from then on for 36 hours to 40 hours the patient is kept under the influence of this drug, which is given in .3 mg. to .6 mg. (1-200 gr. to 1-100 gr.) doses every two hours or three hours. The patient is kept in bed. Diarrhoea, nausea, and vomiting rarely occur. In the sleepless cases it is sometimes necessary to add trional, chloral hydrate, or bromide. The after-treatment consists in tonics, nourishing diet, and rest.—(Amer. Med. Nov. 12, 1904.)

PYRENOL.

Loeb describes pyrenol as a combination of salicylic and benzoic acids and thymol with a sodium salt. He found it to act as an expectorant, and a solvent, and to diminish secretion. It is a sedative in coughs. It is indicated in acute and chronic bronchitis, asthma, influenza, pleurisy, and pneumonia. No ill effects were noted from its use, upon the kidneys or other organs, in doses of seven and one-half grains given six times daily.—(N. Y. Med. Jour. Nov. 19, 1904.)

COUNTY SOCIETIES.

[Secretaries of county societies are requested to furnish for this column, and without further notice, all county society news of interest, such as the date and place of the monthly meeting, notice of death and marriage, epidemic disease, and, in fact, everything which might be of interest to brother practitioners in the State.]

The *Breckinridge County Medical Society* met at Hardinsburg, Ky., Thursday, December 8, 1904, and elected the following officers: President, Dr. J. B. Frymire; Vice President, Dr. A. M. Kincheloe; Secretary, Dr. Jno. E. Kincheloe; Censor, Dr. J. E. Matthews; Delegate, Dr. Jno. E. Kincheloe.

JOHN E. KINCHELOE, Sec'y.

The *Calloway County Medical Society* held its annual meeting Wednesday, January 4th, and elected officers as follows: President, E. T. Dunaway; Vice President, W. G. Johnson; Secretary-Treasurer, W. H. Graves.

As it was a very disagreeable day with typhoid fever still raging in the western portion of the county and a scare—and it proved to be only a scare—of smallpox in the southern portion, our attendance was small. We elected officers, paid our dues, straightened out a few kinks, and made new resolves for another year.

W. H. GRAVES, Sec'y.

The *Daviess County Medical Society* met at the City Hall in Owensboro, on December 20, with the president, Dr. J. P. Heavrin, in the chair and thirty-seven physicians present.

Dr. W. L. Barnett, of Deanfield, and Dr. W. L. Tyler, of Curdsville, were admitted to membership. Dr. J. L. Early, of Knottsville, Dr. B. F. Tichenor, of Pleasant Ridge, Dr. G. A. Hardwick, of Livia, and Dr. J. A. Kirk, of Ensor, made application for membership.

The annual election of officers resulted as follows: President J. D. Russell, of Yelvington; Vice President, J. M. Stuart, of Owensboro; Secretary-Treasurer, J. J. Rodman, of Owensboro; Censor, W. E. Irvin, of Owensboro. The secretary reported forty-eight members in good standing and a small surplus in the treasury.

Dr. A. McKemsey made a very interesting report of a case of paraplegia, which was discussed by Drs. Glahn, W. F. Stirman, S. Lambert, and D. M. Griffith.

Dr. H. K. Orsburn reported a case of hemorrhage from the stomach; discussed by Drs. J. W. Ellis, A. McKimsey, D. M. Griffith and A. McDonald.

Dr. J. C. Lockhard reported a case of as-

cending paralysis; discussed by Dr. J. W. Ellis.

The president appointed Drs. S. J. Harris, J. Glahn, and J. M. Stuart a Committee on Public Health and Legislation.

The society then adjourned to meet at the same place on the third Tuesday of March, 1905.

J. J. RODMAN, Sec'y.

The annual meeting of the *Fayette County Medical Society*, was held in Lexington December 13, the president, Dr. N. L. Bosworth, in the chair. It was announced that the secretary, Dr. D. J. Healy, had lost all records of the society except the charter, and had removed to Washington, D. C. The Board of Censors reported favorably on the applications of Drs. Thos. A. Bullock, R. Julian Estill, John C. Lewis, and George E. Muir, and they were unanimously elected to membership.

The election of officers for the ensuing year was next in order, and resulted in the election of Dr. W. O. Bullock, President; Dr. T. A. Lewis, Vice President; Dr. W. H. Smith, Secretary; Dr. B. L. Coleman, Treasurer; Dr. R. L. Willis, Delegate to State Association; Dr. Geo. P. Sprague, Second Delegate; Dr. E. M. Wiley, Member Board of Censors for three years. Dr. W. O. Bullock resigned as member of the Board of Censors, and Dr. C. W. Trapp was elected to fill the unexpired term of one year.

GEORGE P. SPRAGUE, Sec'y.

The *Grant County Medical Society* met in the office of Dr. J. W. Violet, Williamstown, Ky., on Monday, January 8, at 2 p. m. with the following members present: Drs. N. S. Mathews, of Williamstown, President; J. W. Violet, Secretary; and Drs. Eckler, Abernathy, Scroggins, Day, Agee, Fraid, Simpson and O'Hara.

At this meeting officers were elected for the ensuing year as follows: President, Dr. C. D. O'Hara, of Williamstown; Vice President, Dr. J. W. Abernathy, of Mason; Secretary, Dr. J. G. Renaker, of Dry Ridge; Treasurer, Dr. N. S. Mathews, of Williamstown.

A Committee on Program reported a paper on the subject of "Burns" to be read by Dr. C. D. O'Hara at the next meeting, which will be held with the North Kentucky Medical Society in Williamstown, the second Thursday in February, 1905.

J. G. RENAKER, Sec'y.

At its December meeting the *Harrison County Medical Society* was entertained by Drs. Barkley and Clifford. Dr. Joseph Eich-

burg, of Cincinnati, was present and read a very interesting paper on "The Medical Aspect of Appendicitis," which was discussed by Dr. Daugherty, of Paris, and members of the society.

The following officers were elected for the ensuing year: President, Benj. G. Gillespie; Vice President, N. W. Moore; Secretary, J. M. Rees; Treasurer, B. B. Petty; W. H. Carr was selected as delegate to the Kentucky State Medical Association.

After transacting other business of the meeting the society adjourned to meet the first Monday in January.

W. H. CARR, Sec'y. *pro tem.*

The *Logan County Medical Society* held its regular winter meeting at Russellville, Ky., January 2nd, 1905.

A paper entitled, "The Business Side of Medicine," by Dr. H. F. Bean, of Auburn, Ky., was read by Dr. W. R. Burr (Dr. Bean being absent.) The title was well selected and the paper well written; it was carefully listened to and favorably and thoroughly discussed.

A paper by Dr. M. R. Perry, of Russellville, Ky., entitled "The Desire to Cut," was listened to with interest.

The annual election of officers was held and the following officers elected: President, Dr. M. R. Perry, Russellville; First Vice President, Dr. W. R. Burr, Auburn; Second Vice President, Dr. E. F. Brodie, Olmstead; Third Vice President, Dr. A. M. Crittenden, Ferguson; Secretary-Treasurer, Dr. J. K. W. Piper, Russellville; Delegate, Dr. M. E. Alderson, Russellville. Our Vice Presidents are also censors.

We had a good attendance and the prospects for a good society year are encouraging. We have divided our county into four squads for the purpose of convenience, each agreeing in turn to furnish papers for the ensuing meeting.

J. K. W. PIPER, Sec'y.

The *Monroe County Medical Society* met at the Clancy House, Tompkinsville, Ky., Thursday, December 15, 1904, with eight members present. Dr. R. F. Duncan, Tompkinsville, was elected President; Dr. T. H. Bedford, Meshack, Vice President; Dr. E. E. Palmore, Strode, Secretary-Treasurer. The treasurer's report showed a balance of \$5.89 in the treasury.

The following program, subject to amendment, was adopted for the year 1905:

Tompkinsville, Thursday, Jan. 19, 1905.
Croup.....Dr. Bedford
Diphtheria.....Dr. Palmore
Acute Articular Rheumatism.Dr. H. I. Jones

Tompkinsville, Thursday, February 16, 1905.
Pneumonia.....Dr. Duncan
Neuralgia.....Dr. Walden
Anesthesia.....Dr. Bushong

Tompkinsville, Thursday, March 16, 1905.
Neurasthenia.....Dr. England
Autotoxia.....Dr. Smith
Abortions.....Dr. Hamilton
Tompkinsville, Thursday, April 20, 1905.
Gonorrhoea.....Dr. Walden
Eczema.....Dr. Sympton
Trachoma.....Dr. Ray

Gamaliel, Thursday, May 18, 1905.
Measles.....Drs. Riggs and Hamilton
Typhoid Fever....Drs. Crabtree and Smith
Cholera Infantum..Drs. Young and Calvert

Tompkinsville, Thursday, June 15, 1905.
Scarlet Fever.....Dr. Jones
Milk Poison.....Dr. Bedford
Conjunctivitis.....Dr. Ray

Fountain Run, Thursday, July 20, 1905.
Dysentery.....Drs. Calvert and Smith
Cholera Morbus....Drs. Duncan and Dunn
Summer Fevers...Drs. Stone and Hamilton

Meshock, Thursday, August 17, 1905.
Malaria.....Drs. Jones and Sympton
Sanitation.....Drs. Duncan and England
Septicemia.....Dr. Palmore

Tompkinsville, Thursday, Sept. 21, 1905.
Endocnietritis.....Dr. Bushong
Gonorrhoeal Rheumatism...Dr. Bedford
Salpingitis.....Dr. Hamilton

Tompkinsville, Thursday, October 19, 1905.
General Paralysis.....Dr. Walden
Indigestion.....Dr. Simpson
Appendicitis.....Dr. Bushong

Strode, Thursday November 16, 1905, at Dr. Palmore's.

A Day's Quail Hunt By All.
Tompkinsville, Thursday, December 21, 1905.
The Work of the Year.....Dr. Duncan
The Work of the Future.....

.....Drs. Bedford and Palmore
Election of Officers for 1906.

Adoption of Program for 1906.
E. E. PALMORE, Sec'y.

McLean County Medical Society.

Dr. James B. Bullitt, Louisville, Ky.

My Dear Doctor:—Your letter of September 19, came to hand in due time and was read before the *McLean County Medical Society* at the December meeting. The society heartily endorse the plan of having representative men visit the county societies. Our society will meet during the year 1905 at Calhoun, the county seat, on the first Thursday in July and December, and at Livermore on the first Thursday in April and October. We would be glad to have you send us a man at

our April meeting at Livermore, it being more accessible, being on the L. and N. R. R.

Dr. H. J. Beard, of Livermore, was elected President for 1905; Dr. J. H. Harrison, of Livermore, Secretary; Dr. J. H. Gates, of Calhoun, Delegate to the State Association.

PROGRAM FOR THE YEAR 1905.

Livermore, Ky., April 6, 1905.

Broncho Pneumonia.....Dr. A. F. Ayer

NeurastheniaDr. R. L. Ford

Calhoun, Ky., July 6, 1905.

Acute Intestinal Diseases of Summer... "

.....Dr. I. J. Townes

Management of Labor and ComplicationsDr. W. P. Miller

Livermore, Ky., October 5, 1905.

Differential Diagnosis of Infectious DiseasesDr. W. G. Hansford

Responsibility of the Profession for Criminal Abortion and the Best Remedy to Prevent It....Dr. J. H. Harrison

Calhoun, Ky., December 7, 1905.

Appendicitis, Diagnosis and Treatment.

.....Dr. I. J. Townes

Duties of County Health Officers.....

.....Dr. H. W. Gates

H. W. GATES, Sec'y.

Shelbyville, Ky., Jan. 12, 1905.

The annual meeting of *Kentucky Midland Medical Society* was held in the Council Chamber. Present, Drs. Lewis, Frank, Wathen, Beard, Pratt, Abell, Bullitt, Crenshaw, Lawrence, McClure, Pfingst, Sprague, F. Beard, S. L. Beard. Several essayists were absent. Dr. Sprague was appointed secretary pro tem. Secretary Knox absent, no minutes.

Dr. Sprague's paper, "Tubercular Meningitis," discussed by Drs. Bullitt, Lewis, Pfingst, Crenshaw, Beard; Sprague closed. Adjourned for dinner.

Dr. Abell, "Prostatic Enlargement," discussed by Drs. Wathen, Bullitt, Frank, Lewis; Abell closed.

Report of Location Committee; Versailles, second Thursday in April. Report of Program Committee adopted.

Drs. Abell and Bullitt elected honorary members. The papers read were given the State Secretary for publication.

Dr. R. D. Pratt elected President; Dr. W. B. McClure, Vice President; Dr. Knox, Secretary-Treasurer.

Dr. Sprague suggested that this society make of itself a district branch of the State Association and be composed only of members of their respective county societies. Dr. McClure seconded the suggestion. Dr. Pratt made the motion, which was pass-

ed, that Dr. Jno. A. Lewis, Louis Frank, and E. Hume be made a Board of Censors for the year. Dr. Frank suggested that a Committee on Constitution, to draft a constitution in harmony with the State Association, be arranged for.

Dr. Pratt inducted into the chair. President Pratt called on Dr. Bullitt to explain when and how dues were to be paid to the State, and how to increase interest in county societies.

A rising vote of thanks was given the profession of Shelbyville.

The *Taylor County Medical Society* met in regular session at Campbellsville, Ky., December 13, 1904. The regular routine of business having been disposed of the following officers were elected: President, C. V. Heistan, Merrimac; Vice President, H. G. Sanders, Campbellsville; Secretary-Treasurer, J. B. Buchannan, Campbellsville; Delegate, J. L. Atkinson, Campbellsville.

Dr. O. M. Kelsey exhibited specimen with history of urinary calculus removed from urethra of male child of three years.

The next meeting of the society will be at Campbellsville, Ky., Thursday after the first Monday in March, 1905, at 12 m.

J. B. BUCHANAN, Sec'y.

QUINIC ACID.

Oberndoerffer considers his experiments to determine the factors which lead to a retention or an increase of excretion of the calcium salts. He shows that by means of acids, considerable calcium can be withdrawn from the body. For his experimental studies, he used quinic acid, and proves that by its use the amount of calcium salts in the urine and the feces can be decidedly increased, exceeding the amount ingested. He assumes that an increased quantity of calcium is drawn to the intestinal mucous membrane by the action of the acid. No therapeutic value can as yet be attached to the results of the studies.—(N. Y. Med. Jour and Phila. Med. Jour. Nov. 19, 1904.

Rockefeller Research Laboratory.—The corner stone was laid during the first week in December by Dr. Simon Flexner, the Director of the institution, assisted by Dr. T. M. Prudden, Dr. L. Emmett Holt and Dr. C. A. Herter. Within the corner stone was placed a photograph of Mr. Rockefeller, who has endowed the institution with \$1,200,000, and who promises more when it is needed.

OZAENA.

De Simoni reports the results of an investigation of five cases of foetid rhinitis due to the bacillus pyogenes foetidus. The affection, as a rule, attacks persons in good general condition, and age, sex and occupation, etc., have little to do with its development due to the bacillus, and the infection may be It may arise as a circumscribed coryza carried to the nose by fingers, handkerchiefs, etc. It is not accompanied by any general symptoms. The patients complain of headache, fullness in the head, and obstruction to nasal breathing; of a discharge of purulent character; of frequent sneezing, but, most of all, of an intense and foul odor of the breath. On examination the nose shows the appearance of hypertrophic rhinitis. The discharge is fluid, whitish, and does not readily crust. The bacillus pyogenes is found in it. The treatment consists of the use of detergent and antiseptic washes.—(N. Y. Med. Jour., Nov. 19, 1904.

AN ANTENATAL CASE OF MEASLES.

J. R. Gibson, (*The Lancet*, October 31, 1903) reports the case of a woman attended in a third and normal confinement. The nurse when washing the child called attention to some dull red spots on the buttocks. A suspicion was entertained of a syphilid, but no opinion was expressed as the two previous children were very healthy and the character of the parents was above reproach. On the next morning the uncertainty was cleared up, for the author found the child covered with a typical measles rash and suffering from suffusion of the eyes, nasal catarrh, and bronchitis, and, in short, all the cardinal symptoms of measles. The child recovered in the usual period and without any medicinal treatment. The temperature ranged from 99 degrees to 100 degrees F. The mother made an uninterrupted recovery and showed not a single symptom of measles. When the baby was eight months old the other two children took the measles but the baby did not. The mother had had measles when a child.—(Journal American Medical Association.

Pennsylvania State Medical Examination.—The official report of the Pennsylvania State Medical Board shows that the graduates of the University stood second in the number of successful candidates at the recent State Board examinations. The Women's Medical College of Philadelphia made the highest average.

POISONING WITH EXPLOSIVE GELATIN.

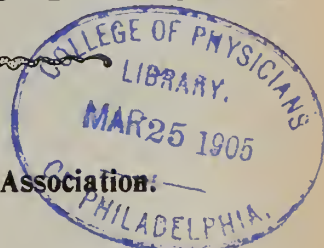
Kavalieroff reports the following interesting case: The wife of a miner who was employed in blasting with explosive gelatin, found a cartridge containing this substance in her husband's trunk and ate it, taking the cartridge for a piece of confectionery. She was taken with headache, vertigo, and pain in the abdomen. Her husband was afraid that she might explode on the way to the hospital, as her abdomen had become swollen. She was admitted in a state of unconsciousness. Gradually she became partly conscious, and complained of severe pain in the abdomen and in the head. Her face and neck were very red, and the patient was so sensitive that the slightest touch of her hair would evoke a scream. The conjunctivæ were reddened; the pupils moderately dilated; the tongue was tremulous. There was difficulty in swallowing and paresis of the larynx. The abdomen was distended. In view of the fact that explosive gelatin, which is a compound of nitroglycerine, gives off a quantity of nitrous acid vapors while decomposing, the stomach was washed with a solution of sodium bicarbonate, and a number of bubbles of gas escaped. A dose of castor oil was poured into the stomach tube, the patient was given a subcutaneous injection of caffeine, sodium benzoate, and ergotine, and coffee internally. The patient had a copious evacuation and quickly recovered. The symptoms, therefore, were those of poisoning with nitroglycerin, amyl nitrate, etc. The dose of nitroglycerin taken by this patient was two ounces, or six thousand times the therapeutic dose.—(N. Y. Med. Jour., Nov. 19, 1904.

TESTING COLD STORAGE MEATS.

The nutritive value of food preserved for a considerable time in cold storage will be made the subject of experiment by Dr. Wiley, chief chemist of the Department of Agriculture, this winter. Among the samples of food to be investigated are partridges, quail, and beef which have been lying in the cold storage warehouse at West Point for two years. This meat appears to be in perfect condition, but the "poison squad," as the food testers are called, will make a practical test of its digestibility and nutritive value. This year's experiments will also include tests of foods preserved with formaldehyde and water disinfected with sulphate of copper. Of the twelve young men who compose this year's squad five are medical students at Georgetown University.—(Med. Record, Nov. 19, 1904.

SPECIAL ISSUE: PUBLIC HYGIENE AND STATE MEDICINE.

KENTUCKY MEDICAL JOURNAL



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No. 10.

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Sulphate of potassium, in grams, per litre	0.91
Tartrate in grams, per litre	1.85
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Acid, calculated as sulphuric	3.13
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Acid salicylic	none
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VOL. II.

LOUISVILLE, KY., MARCH, 1905.

NO. 10.

THE IMPORTANCE OF THE ESTABLISHMENT OF A DETENTION AND ISOLATION HOSPITAL FOR CONTAGIOUS AND INFECTIOUS DISEASES, AND ALSO THE NECESSITY FOR THE INSTITUTION OF A SANATORIUM FOR THE CARE AND TREATMENT OF TUBERCULOSIS IN THE CITY OF LOUISVILLE.

By M. K. ALLEN, M. D., Health Officer
City of Louisville, Ky.

The care of infectious diseases in isolation hospitals, properly conducted and managed, has been shown by actual experience to be more successful and satisfactory than is possible in private homes. Many people having relatives or friends afflicted with a contagious or infectious disease are unfortunately not able to provide for their care, and because of this fact many deaths result from these diseases in cases which should and could be saved if cared for in a hospital thoroughly managed and equipped for this especial purpose.

Aside from this, the want of a hospital of this character not infrequently results in epidemics, or endemics, of contagious and infectious diseases, because it is often next to impossible to properly isolate the patient, and the infection is thus propagated and disseminated from one member of the family to another, with the consequent result of much sickness and often death, all for the lack of an institution as herein suggested. Again the isolation of patients suffering from communicable diseases is almost impossible in hotels, apartment houses, and in the ordinary "rooming-house." The advantages and importance of a contagious and infectious disease hospital are too manifold to discuss thoroughly in this paper; but in addition to what has already been said it should be mentioned that, if children suffering with diphtheria could, in the very incipency of the attack, be taken to a hospital, the antitoxin treatment administered and then be properly cared for by a person trained in this work, doubtless many lives would thus be saved.

In the construction of a hospital as suggested, separate wards could be arranged for the care of consumptives, in the absence of

a consumptive sanatorium, as no person suffering from this disease should be permitted to occupy any part of a general hospital, for the reason that the inter-communication of disease is so great that there is much danger of consumption being communicated to hospital patients who are suffering with other diseases, and whose resisting powers are enfeebled, thus making them an easy prey to this most deadly disease.

I have heretofore contended that this kind of hospital service would not only be efficacious in saving human life, but that it might be made remunerative, for the reason that it would be gladly patronized by persons having this character of disease, who, by reason of the fact that they lived in apartment houses or hotels, but having the competency which ordinarily means the comforts of life, would be more than willing to pay liberally for competent hospital advantages and treatment. We had during the past year one noticeable instance of this character: a young lady afflicted with diphtheria had to be placed on an anchored boat in the Ohio River as the only means offered for obtaining perfect isolation.

It will be observed by a careful analysis of the mortuary records of the Health Department for the fiscal year that consumption caused more deaths than did any other disease, as has been the case for many former years. It is now a well recognized fact that consumption is a perfectly preventable disease. It is seemingly strange that the public mind is not more familiar with the prevalence and mortality of this disease. It seems to be an opinion in the minds of the laity that consumption must be permitted to prevail to such an alarming extent as to carry off one-seventh of all persons born in this country. Sanitarians, statisticians and public health workers continue to call attention to the ravages of this disease year after year, and to point out methods for prevention and cure, yet their statements and suggestions are practically ignored. It is true that a few sanatoria for the care and cure of consumptive patients, to a limited number, have been established in various parts of this country; yet most of these have been established through individuals philanthropically inclined. Statistics gathered from institutions of this character go to show that many cures have resulted from the methods

late National, State, and Municipal authorities to like efforts. Out of the total death rate of 4,092 for the last fiscal year, 1,568 were caused by consumption. This is an alarming death rate from one disease, and speaks volumes in favor of the contention that Louisville should have a sanatorium established for the care and cure of this most deadly disease.

ISOLATION AND DETENTION HOSPITALS FOR COUNTRY DISTRICTS.

By ARTHUR T. McCORMACK, M. D., Bowling Green, Ky

A discussion of this question necessarily is to be directed along one of two lines. In order to present it to my readers fairly I shall present both, and will state frankly and boldly at the outset than one or the other of these course must be adopted in the management of smallpox or any other contagious disease. One of these plans of procedure is the old "laissez faire" one of the econocists—let every person or family affected with contagious diseases be governed by his own conscience and let boards of health and other officials have only advisory powers. The other is the more modern one, that no man has the right, on account of any affliction he or some member of his family may have, to endanger the health or lives of his neighbors. Let us take up these two methods of combatting contagion and discuss them briefly.

Under the first, health officials should confine their action to advising the people in the public prints and verbally as to the nature of contagious diseases, letting them then decide for themselves whether they should take their advice or not, and letting the head of each family in which some contagious disease exists decide whether his family shall remain at home or shall mingle with his neighbors in church or school or on the public roads, and also how much, if any, disinfection shall be done in infected rooms, and all expense should be borne by the sick person or his family. The advantages of this method are obvious. County officials would have no responsibility during epidemics. County treasuries would expend no money during epidemics. Any person who complained that his family had suffered from disease or that some of them had died, could be silenced with the statement that the negligence was that of himself or his neighbors and that public officials have nothing to do with the matter. "Let

your dead bury their dead; we intend to take no step that might involve our political future," might well be the paraphrase of the old quotation. County health officials, lay and medical, should understand that this is what is meant when people sick with a contagious disease are left or *quarantined in their homes. It means that such officials are negligent and shiftless, and are unfit for the responsibility imposed upon them by law. These statements are supported by numerous reasons. The proper management of one case of smallpox, for example, costs about seventy-five dollars. This includes medicine, nurse, food, clothing and disinfection. Each additional case in the same house should not add more than twenty-five dollars to the bill. Take any two of our counties and suppose that each is to have a hundred cases of smallpox. In one they are treated each in his separate home. The cost in this county would be \$7,500.00, all borne by the sick and afflicted, and the epidemic would be just beginning. Ask the people of Trigg or Christian counties if this statement is not true. On the other hand, let every case be removed to a properly equipped and managed hospital and the expense of management would be reduced to \$2,550.00, the tax-payers dividing the burden according to their wealth and your epidemic is at an end. Ask the people of Warren or Jefferson counties if this is true.

Again, literature and advice will reach the people very gradually, first getting to the more intelligent and very, very slowly getting to the poor or ignorant. Consequently contagious diseases ravage these classes most, and yet each year there are tens of thousands of useless deaths amongst the fairest and most promising children of our land because negligent officials permit ignorant or wilful people to act according to their individual bent rather than in accord with the public weal.

As lately as 1893 one of the most distinguished authors said that smallpox has now only historic interest. "It is on the road to extinction, and may occur in our day only in uncivilized lands." It is sad, but true, that inefficient health officials and time serving fiscal officials, one or both, put many counties in Kentucky and other states in this class. In six years, our State has had 25,000 cases of smallpox and over 300 deaths and the cost to the various treasuries has been more than a half million dollars, not mentioning the horrors of the pestilence, loss of time of those sick and the expense to individuals and to business. Most of these cases occurred because many of our people do not know that vaccination is a perfectly safe and sure protection against this disease, but more occurred because officials were afraid to do their

*I use the expression, "quarantined in their homes," in this connection, advisedly, as I consider the ordinary house quarantine in country districts as a rather expensive farce.

duty. If the board of health for any county will remove every case, as soon as reported, to a properly equipped eruptive hospital, first vaccinating every person exposed in at least three places an inch apart on a sound, healthy arm, with reliable virus, and will manage their eruptive hospital properly, they will furnish their people the best and cheapest protection against this disease. Taking all the cases into consideration, it has cost an average of \$40 to conduct a case of smallpox. While this should not be more than \$25 per capita, the cost of compulsory vaccination is 40 cents per capita. No intelligent official should hesitate when called upon to decide which is best for his community.

If those with smallpox are removed to a hospital before the end of the second day of the eruption and the mattress and bedding which they have used is removed with them there is no need of disinfection. If a person remains in a private house throughout the disease everything in the room in which he is sick should be burned that cannot be boiled and the room disinfected with formaldehyde.

Under this item alone we estimate that in Warren county we have saved our people more money than the management of all of our cases have cost the county.

In Warren county we have a substantial brick, tin-roofed building, with four large rooms, each capable of accommodating twenty patients. There are also a large kitchen and pantry with concrete floors. About a hundred yards away is a large frame, two-roomed building for colored patients. Adjacent to our brick building the City of Bowling Green has two cottages, well built, light and airy, which will accommodate 20 more patients, and their colored house is similar to the one used by the county. Every case, white or black, rich or poor, is removed to the hospital as soon as it is reported in our ambulance which is equipped for the purpose. Our caretaker is in constant attendance. The rooms and bedding are kept aired and we are ready to properly care for a patient at any time. Our county and city officials and our courts have given us hearty cooperation and prompt assistance at every point, our people are contented with our management and every lay official who has taken an active part in the enforcement of law in this respect has been re-elected by their grateful constituents. When the people of other counties, where such conditions have not existed, awake to the fact that disease—loathsome and horrid pestilence—exists amongst their people be-

cause of the parsimony or ignorance or timidity of well-paid officials, I trust their votes will be cast in the full light of such an awakening.

THE VENTILATION OF PUBLIC BUILDINGS.

By E. H. MARK, Superintendent of Public Schools,
Louisville, Ky.

The discussion of this subject will include the application of the sanitary arts to churches, schools, theatres, jails, etc.

During the past twenty years, and especially during the past ten years, public hygiene and State medicine have received the careful consideration of the law-makers of both the Nation and the States. Sanitary laws have been enacted giving unusual privileges and powers to health officers. Sanitary Science and preventive medicine have gone hand in hand and to-day are practically the determining factors in a large part of the theory and practice of medicine. Considering the vital importance of sanitary science we are somewhat astounded at the failure of many of the medical schools to provide for instruction in it. In no branch belonging to a good course in medical instruction have so many discoveries been made by which so many safeguards have been thrown around the human family, not to speak of the protection which has been afforded the domestic animals, as in sanitary science. While so little has been done in teaching the theory of this science, far less has been done in its practice. A course in the sanitary arts is practically unknown in any of our medical schools. Vast sums of money are expended annually for both private and public sanitation and human life has been made safer, longer and happier, but as a rule the information upon which these expenditures have been made and this safety has been secured has not come from the medical profession.

While for many years a tolerably rigid inspection has been provided for meats, foods, milk, dairy products, etc., in the larger cities and towns, it is only in recent years that the ventilation of public buildings has received the attention it deserves. In the construction of most churches, schools, jails and assembly halls, ventilation is wholly neglected. During the past ten years, in nearly all the large cities and many of the smaller ones the ventilation of school buildings has received

the attention which its hygienic importance demands. Formerly it was only considered necessary to heat school rooms and for this purpose a stove or direct steam heat was found to be the most economic and surest means of doing it. To-day, while heating is of great importance, ventilation is considered of greater importance. The number of bushels of coal that can be saved is no longer the desideratum looked for, but the amount of good, warm air that can be furnished each pupil per minute is the controlling factor in the installation of heating and ventilating plants. Those interested in having the best ventilation are not satisfied with securing plenty of fresh air under ordinary conditions, but the plant must be so constructed as to furnish it under unfavorable conditions. In the modern ventilating plant the action must be positive and removed from the influence of the winds, damp and muggy atmosphere, nearness of tall buildings, and any other influences which would cause it to fail to furnish the required amount of air to all parts of the building in which it is placed. That the gravity system of hot air furnaces or of steam fails to properly ventilate under certain atmospheric conditions is well known. If a strong wind is blowing, the rooms on the side of the house exposed to it do not receive the amount of fresh warm air they should, while the rooms not so exposed are overheated. Many other conditions influence unfavorably the action of the gravity system. Therefore such a system should not be used in buildings where large numbers are accustomed to assemble. School rooms, as in Louisville or other cities, where from thirty-five to eighty pupils are to spend at least five hours each day, must be provided with a heating and ventilating plant that will be positive in its action and in which no element of chance shall be allowed to enter. The system that comes nearest to meeting all the demands for a thoroughly hygienic condition, both for heating and ventilation, is the mechanical system. In this system either furnaces or steam coils can be used but the amount of air to be heated and sent to the rooms is furnished by a fan driven by a steam or gas engine, or an electric motor, the motive power being determined by the conditions under which the plant is operated. If the heat is to be furnished by steam coils then a steam engine will be the best power for driving the fan, but if the heat is to be taken from furnaces then either a gas or gasoline engine, or an electric motor will be required. The fan must be so located in the building that a constant supply of fresh air can be secured. This air, after passing the fan, is forced over either steam coils or furnaces by which it can be raised to the proper temperature for heat-

ing the rooms. After being heated it passes into a plenum chamber from which it is distributed by ducts to all the rooms in the building, each room being provided with its own duct and each duct provided with its own volume and regulating damper. Every heating and ventilating plant should have a positive automatic system of regulation, so that the temperature in any room may be kept as nearly uniform as possible. Two or three such regulating systems are in use in this country. In all the modern school buildings in Louisville such a system has been installed and the thermostats which control the temperature have been set to 70 degrees F. The temperature of any school room in any building in which such temperature regulation has been placed will not vary more than one degree from 70 degrees F. during the entire time the schools are in session. The same system of heating and ventilating is applied to all water closets and urinals. The temperature regulation is usually omitted in these closets and the halls.

The amount of fresh air, properly heated, furnished for each child in a school room should be about thirty cubic feet per minute. The air in each room should be changed about seven times an hour. The opening of the ducts for discharging the fresh air into the rooms should be about eight feet from the floor and the outlet for vitiated air should be at the floor, or better still in the floor. All that has been said about school heating and ventilation will apply to the heating and ventilating of other public buildings, except in the case of churches and theatres where a more rapid change of air would be necessary on account of the greater number of occupants to the floor space and cubic space. The reader of the works on hygiene published in this country can not help being impressed by the failure of all but one of them to mention either hospital or jail sanitation. This one mentions in a few lines the necessity for pure air in hospitals but says nothing whatever of the means of securing it. Not a single author has a single word to say of jail sanitation. Many of our jails, especially in our large cities, need a good system of ventilation; into them are crowded, and in many cases overcrowded, the persons in the community who are most likely to have paid the least attention to personal hygiene. Many of the inmates are infected with loathsome diseases, especially those who come from that portion of society where syphilis is most common and the cleanliness of body is a lost art. The ventilation of jails and state prisons should be a matter for first consideration, but in too many cases it has received none whatever. A visit to almost any one of

the penitentiaries will show that the ventilation is of the crudest kind and a visitor to many hospitals will find the largest wards without any ventilation whatever and the heating done by a direct steam system which is not as efficient, so far as ventilation is concerned, as a good stove.

In this country but little attention has been given to the ventilation of churches, for the reason, probably, that they are used for only a short time with long intervals between occupancy. A visit to almost any one of the large churches in our cities during either morning or evening services will show that ventilation ought to have received careful consideration in its construction. To the person entering, after breathing the pure, outside air, the air in the assembly room will seem stifling and the fetid odor emanating from the breath and clothing of the attendants will be only too apparent. The drowsy attitude of many persons in the assembly will be another indication of the vitiated condition of the atmosphere in the room. In those churches heated by hot air furnaces there is considerable ventilation, but in those heated by direct steam or hot water systems there is little, if any, change of air.

There is another class of public buildings that are occupied for a greater part of the day and for months of the year, in the construction of which little or no thought has been given to ventilation. These are the court rooms of the country. The experience of all persons who are summoned as jurors and witnesses to the court is much the same. The fetid air of these rooms soon drives the average man to seek the good, pure, outside air. There can be no excuse for this condition, for the commonwealth can at relatively little expense supply court rooms with an efficient ventilating plant and thereby make the compulsory attendance of the jurors and witnesses at least pleasant so far as good air is concerned. It is to be hoped that in the near future such steps will be taken as will secure for all public buildings where persons assemble in large numbers, legislation in the interest of public health. When such legislation is secured one of the most important matters to be considered will be that of good ventilation. The world can never forget its debt of gratitude to Capt. Cook in suppressing scurvy; to John Howard for his work in completely banishing the fatal disease—jail fever—from the category of diseases; to Dr. Edward Jenner for his discovery of vaccination by which that most hideous and terribly fatal disease, smallpox, which has long been the terror and scourge to all classes of the community, has been deprived of its terrors and fatality; to Louis Pasteur for his epoch-making discover-

ies which led to the germ theory of disease; to Sir Joseph Lister for his work in antiseptics which paved the way for the modern practice of sanitary or aseptic surgery. Nor will it forget the man or men who prolong human life and add to its pleasure and happiness by enforcing the common sense principles of sanitation.

SANITATION OF RAILWAY CARS IN THE STATE OF KENTUCKY.

The Kentucky State Board of Health accomplished a notable achievement at the latter end of the year 1904 by compelling the several railroad companies operating passenger cars in and through the State to agree to a thorough cleansing and disinfection of the cars in accordance with regulations laid down by the Board. The railway companies at first demurred, being unwilling to go to the expense necessitated by the carrying out of the regulations. Becoming convinced, however, that the State Board of Health has power to regulate such matters or prevent the carrying of passengers in such cars altogether, the railroads finally submitted with a good grace, and agreed to carry out to the letter the regulations laid down by the State Board.

Kentucky has thus become the pioneer in this important matter of railway car sanitation, and it is to be hoped that other states will at once set going the proper machinery to accomplish similar results. Following are the prescribed regulations:

All day coaches engaged in regular traffic shall be thoroughly cleansed after each trip at such points as facilities for the same have been provided. In no case shall such cleansing be less frequently performed than on every third day of use. In such cleansings, all rugs, matings and upholstered seats and back rests, when practicable, shall be removed from the coach to the open air for mechanical cleansing, and be exposed to sunlight when the prevailing meteorological conditions will permit.

All interior surfaces in coaches are to be mopped, scrubbed or cleansed at intervals of not more than ten days, with solutions of mercury bichlorid, carbolic acid, tricreosol or other disinfecting preparations preferred by any corporation, and approved by this board as to ingredients and strength.

Spittoons are to be provided in numbers of not less than one for each seat in all smoking cars and toilet rooms, and one at each end of all other day coaches, and in all waiting rooms. Placards provided by this board shall be displayed at each end of all such coaches and in waiting rooms, indicating the importance of using the spittoons, and it shall be unlawful for any person to spit on the floor or

platform on any railway car, or other public conveyance or on the floor of any waiting room or platform in any station or depot.

All coaches of any kind in which an acute infectious disease has been carried shall remain closed and unoccupied after such person has been removed until it has been thoroughly cleansed and disinfected by the use of formaldehyde gas in quantities of not less than forty fluid ounces of formalin to each coach. All day coaches in regular use for through travel are to be disinfected after cleansing by some method approved by this board at intervals of not more than ten days.

All toilet rooms, water closets, urinals, spittoons and toilet appliances are to be scrubbed with soap and hot water and disinfected with formalin, or other approved method, after each trip's use, and shall be kept as clean as possible when on the road, and all similar rooms in stations shall be cleansed daily in the same way, and when vaults or surface receptacles are used in stations these shall be disinfected daily with fresh lime.

All preceding regulations in regard to cleanliness and disinfection shall apply equally to sleeping, dining, buffet and parlor cars used in the service of the public.

All blankets, curtains and hangings used in sleeping cars shall be exposed to superheated steam, or other means of disinfection approved by this board at intervals of not more than ten days, and all mattresses shall be so treated at intervals of not more than sixty days.

EDITOR.

THE NEED OF MUNICIPAL AND STATE LABORATORIES.

By VERNON ROBBINS, M. D., Chemist and Bacteriologist, Health Department City of Louisville, Ky.

As a natural result of the increase in city population the local health officer finds it is impossible to inquire into and control certain exceedingly important factors which threaten illness or death in the community—and to this end a laboratory is established.

This institution is the practical work shop for the health officer.

Very simple work is required of it at the outset, in most instances; but as its efficiency and usefulness become recognized it grows in size until the amount and character of work done requires the formation of separate divisions for chemical and bacteriological investigations.

What work should be done in a small city laboratory where only one worker can be afforded? The duties must consist of the simpler and more important chemical and bacteriological procedures. Of the greatest value

is the chemical and bacteriological analysis of the local water and milk supply. With reference to examination of milk I wish to particularly emphasize the importance of the microscopy of sediments—thereby determining udder disease, the presence of easily recognized pathogenic bacteria, and overgrowth of bacteria of any kind, which latter indicates faulty, or entire lack, of refrigeration.

What would be the probable cost of establishing such a laboratory? The room or rooms being granted, there is left to be determined the salary of the man chosen for the work, the cost of equipment and annual expenses. The value of the services rendered, its technical nature, should be properly recognized and only in exceptional cases should the salary be lower than twelve hundred dollars per annum. Lack of stint in salary will attract to the office vigorous, capable applicants, and the most satisfactory results will be obtained. The equipment should be secured for five hundred dollars, while one hundred dollars annually thereafter would be required for renewing chemicals, apparatus, books, and for small additions in general.

As the laboratory grows the next most important step in its work is the bacteriological diagnosis of diphtheria, typhoid fever, examination of sputum for tuberculosis and general analysis of food.

It is most desirable for such laboratories to be able as soon as possible to enter widely into sanitary matters, as the testing of air in neglected places, examining wall paper, clothing, etc., for excess of arsenic, determining the purity of drugs, the character of the public gas supply, etc., etc.

The State laboratory should first of all help out the small towns that cannot afford a laboratory, so that the dwellers in small places will be fairly well protected in these matters.

One of the disgraces of our State is the large number of typhoid infections throughout its territory, especially in small settlements.

The calculated cost of this preventable disease to the State of Kentucky, according to Dr. McCormack, Secretary of the State Board of Health, is \$1,271,375 annually, a very conservative estimate. Such being the facts the creation of a State Medical Laboratory is to be recommended if only from a selfish business standpoint.

Severe infectious cattle diseases frequently require the aid of a bacteriologist for diagnosis, and in these cases the laboratory would be appealed to.

These institutions are generally at first strictly medical in their relation to the city and state, but there is no reason why the more elaborate ones should not be more widely help-

ful, as for instance by determining the quality of materials to be used in city and state construction work, as Portland cement, asphalt, gas piping, etc.

It has been my good fortune to have practically started and built up a creditable laboratory attached to the Louisville Health Department.

The work accomplished here speaks for itself and makes its future secure.

Up to the present, however, our local physicians have not availed themselves of its help as they should in cases of diphtheria, typhoid fever, tuberculosis suspects, and other medical laboratory work.

THE PROBLEM OF THE MILK SUPPLY OF CITIES.

By HENRY ENOS TULEY, M. D., Louisville, Ky.

When it is considered that it is impossible to find a milk supply in Louisville which is fit to be fed to a nursing infant, it can be readily understood that no subject is of so great importance from a sanitary standpoint as the milk supply of cities.

This is due to several causes, the principal one being the lack of interest in this question on the part of the medical profession. The consumer, also, is largely at fault, as he is content to accept any kind of milk because it is cheap; and it is impossible to produce a sanitary milk cheaply.

With a mortality in artificially fed infants six times as great as in the breast fed, we have reason enough for a careful consideration of their food supply, the chief ingredient of which is cow's milk. The general lack of robust health in city children is clearly attributable to their being fed on contaminated milk. Cow's milk of the proper standard should be properly produced and handled at the dairy; produced from cows which are properly housed, groomed, and fed; the milk should be clean, of the proper chemical proportions, and practically bacteria free. All of these requisites are necessary. A milk may be produced from a perfectly healthy herd, yet contaminated at the dairy before delivery. These bacteria and micrococci are found in such countless numbers that milk which contains 100,000 in a cubic centimetre (15 drops) is considered moderately clean. In milk which has been properly cared for, the number of bacteria can be reduced to 3,500 to each cubic centimetre. The cleanest milk in New York City contains 100,000 bacteria in every cubic centimetre, and in Boston 300,000. Milk before it spoils contains probably hundreds of millions of germs, which may represent as many as forty different varieties.

The cows must be properly groomed,

housed and fed. Frequent examinations have shown many micro-organisms present in newly drawn milk, and we have but to see an early morning milking in the average dairy—in the dark, under dirty cows, from dirty udders, by dirty hands, in a foul dairy—to understand where the myriads of germs come from. We have but to see the ordinary delivery wagon with the five or six-gallon milk cans, perhaps but half filled, being churned over our rough streets in the hot summer sun, to realize how rapidly these micro-organisms reproduce in this excellent medium.

As Coit says, "Ignorance and greed in those engaged in the production of milk prevails, and its delicate nature is disregarded in the commercial expedients for its sale."

We know that there are few dairymen who are not in ignorance as to the proper production of milk. It is a well known fact that cows fed upon distillery-waste, hulls, screenings, wet or dry brewer's grain, oil-cake, and sour ensilage produce an impoverished milk, though increasing oftentimes the milking capacity of the animal, and such milk is very harmful when fed to infants. This is one of the most open infringements of our present law, for how common a sight it is for residents of this city to see a procession of one and two-horse swill covered wagons on their way to or from the large distilleries in the different parts of the city. Some investigators have attempted to prove that milk from distillery-waste fed cows is not impure, but entirely without success.

Infectious and contagious epidemics are often traced to the dairy. The action of the State Board of Health of Kentucky in discontinuing the sale of milk from one dairyman, the Board was satisfied was the cause of an epidemic of typhoid fever, is well remembered. A similar instance, which has caused widespread comment, was an epidemic of typhoid fever in Montclair, N. J., caused by milk. The report of the State Board of Health of Massachusetts contains records of several epidemics of typhoid fever traced to dairies. Another instance is the epidemic of scarlet fever reported in the British Medical Journal as being traced to the milk supply, the milk being infected through human agency, the cows not being suspected as suffering from any disorder. Out of the 200 cases reported all but thirteen obtained their milk from the suspected dairy; the type of the disease was mild, as is usual when conveyed by this agent.

The milk should be of the proper chemical proportion, containing not less than 3.5 per cent of butter fat. While this is absolutely essential to a pure milk supply, yet how inadequate are the laws which permit city

health authorities to seize a sample of milk which is to be analyzed! If the butter fats are up to the standard and the specific gravity correct, the sample is passed, yet this same sample may contain myriads of bacteria and probably a host of tubercle bacilli or other cocci. Quoting Coit again, "One or more cases of bovine tuberculosis could probably be found in one-third of the dairy herds of the United States, and one-sixth of the race have transmitted to them by constitutional inheritance a suitable soil for the tubercle bacilli to grow in."

That milk is a carrier of the tubercle bacilli rather than meat is because milk is taken as a rule in the uncooked state, and is generally consumed by infants; but that milk is a carrier of the tubercle bacillus is a fact beyond peradventure. That apparently healthy animals are the subject of tuberculosis, unrecognized by inexperienced observers, is also a fact, as may be instanced by a mention of the experience of the State Commission of Lunacy in California, in the State Hospital at Stockton. A prize herd of milk cows was submitted to the tuberculin test; those reacting were killed, and in all cases the diagnosis was confirmed by a post-mortem examination. This same experience occurred at the Central Lunatic Asylum at Lakeland, where a large per cent of the herd was found tuberculous, and not one of these would have been selected as a tubercular subject.

It has been found that the average dairy, with proper attention to feeding, watering, housing, exercising and choice of the herd, can produce in all instances milk of the proper standard. But, as before stated, though the standard of the milk may be maintained chemically, what avails it if there is not some provision looking to the *production* of this milk?

We have seen, as noted, that the cleanest milk in New York, which is sold after complying with the laws as regards chemical analysis, contains 100,000 bacteria, to the cubic centimetre, and in Boston 300,000; so any law to be effective must be more stringent and far reaching than any now in force.

Even though there were adequate laws on the statute books regarding milk, its production, handling, standard, etc., no city will appropriate sufficient funds for health departments to carry the inspection far enough. As we have shown, the milk may be chemically correct, but swarming with bacteria and pathogenic organisms. The supervision has not extended to the dairy, the cows, the workmen, etc. It is useless to attempt to clarify or purify contaminated

milk. Once infected, it cannot be rendered fit for use.

The law being unavailable for the enforcement of preventive measures to be applied to the production of milk by all dairymen, and the pressing need of a source where an absolutely reliable and pure milk-supply, at least for infants, can be obtained, being apparent, the most excellent plan devised by Dr. Henry L. Coit suggests itself as a bright star for our guidance toward a pure milk supply.

The preventive measures as related to the production of milk will be best illustrated by a brief outline of the functions of medical milk commissions now engaged in active work in a number of the eastern cities.

These commissions promise that a purely commercial institution never gains the ear nor secures support from the scientific world. Their purpose is to influence the production and proper handling of milk intended for clinical uses, which they seek to accomplish by a rigid supervision of methods imposed by them upon a reliable dairyman. The code of requirements is stringent and binding. It includes ample sureties for its fulfillment, necessary forfeiture clauses, a territorial limit for the sale of the product, provision for the compensation of experts employed by the commission, namely, a chemist, a bacteriologist, and veterinary surgeon. It controls the construction, location, ventilation of buildings, and their drainage. It requires in the stable cleanliness and order, and prevents the use of water from wells or springs holding surface drainage. It regulates the health of the herd, excluding any which are judged by a competent observer to be tuberculous, or found in a state of ill-health prejudicial to the herd. It provides for the proper housing and shelter of the animals, together with their grooming and kind treatment, and the prompt removal of waste products from the stable. It restricts the use of all questionable or exhausted materials for food. It governs the collection and handling of the milk by insisting upon a proper regard for cleanliness as viewed by the physician and sanitarian, as it relates to the animal, her surroundings, the milker, the vessels, and the association of persons handling the milk with sources of infection. It controls every step in the collection of the milk and its preparation for shipment, and adds to the product every detail of care known to promote its keeping qualities or favor its safe transportation. The motives of the commissions are disinterested, and they forbid themselves any pecuniary rewards. The experts employed by the commission are paid by the dairyman. The regular reports of these officers to the commission are the basis of their

approval of the product, which, in the form of a certificate, acquires a commercial value to the dairyman.

It is the opinion of the writer that by such a plan as this we can educate the other dairymen to follow the requirements laid down in the agreement for the production of "certified milk."

ENFORCING THE MILK LAWS IN THE CITY OF LOUISVILLE.

Editor Kentucky Medical Journal:

The statutes of the State of Kentucky, and a city ordinance, make it illegal to sell milk in the city of Louisville, coming from dairy animals which are fed on distillery slop, malt or brewers' grains. More than a year ago the Health Department indicted three prominent dairymen for a violation of this statute. The Circuit Court imposed a fine on one of the dairymen so indicted, a Mr. Saunders, who appealed the case to the Court of Appeals. This Honorable Court upheld the statute in an eleven page opinion. After this 105 dairymen, who were either feeding slop or malt, signed an agreement with the Health Department to discontinue the practice after the last distillery season, which closed in June. Sixty-five of these did discontinue the practice.

There are yet about forty dairymen who are violators of the law. We proceeded against a few of them in the County Court, and their cases were remanded to the grand jury, where by the manipulation of their attorneys, these cases are still pending. As this procedure seems a slow one, I concluded to avail myself of the provisions of an ordinance which provides that all persons who sell milk in this city must first obtain a permit so to do,—the permit lasting for one year. As their permits expire, we have refused to grant new ones to offenders against the law. I had the names of those refused renewal permits published in all the daily papers, that the users of milk might know the character of product they were buying. It is now my purpose, under the ordinance referred to, to refuse to permit such offenders against the law to sell milk in the city of Louisville. The City Attorney now has under advisement the construction of all law on this subject and my authority in the premises. I shall exercise every vestige of authority I may have to prohibit the sale of this class of milk prohibited under the law.

Very respectfully,

M. K. ALLEN, Health Officer.

THE OBLIGATION OF THE PHYSICIAN IN ATTENDANCE ON PATIENT WITH INFECTIOUS DISEASES--PRACTICAL METHODS FOR PREVENTING THE CARRYING OF INFECTION—METHODS OF DISINFECTION. FOR HOSPITALS, FOR PRIVATE HOUSES, AND FOR THE CLOTHING AND PERSON OF EXPOSED INDIVIDUALS.

By PHILIP F. BARBOUR, M. D., Louisville, Ky.

The term *infectious diseases* embraces all those diseases which are caused by a living micro-organism. There are many diseases which are placed in this category whose causes have not as yet been isolated, but which by analogy to the so-called germ diseases must be classed under the same head. Strangely enough the most common contagious diseases, such as scarlatina, smallpox, measles, German measles, etc., are as yet without any accredited organism as their cause.

The title of this paper offers a very wide scope, but it will be limited to the discussion of infectious diseases from the standpoint of the sanitarian rather than that of the physician. Obviously the obligation of the physician in attendance upon patients with infectious diseases varies with the disease, for smallpox should be treated in a widely different manner from diphtheria, and each of these, from typhoid. But the obligation of the sanitarian would be alike in each instance, to prevent as far as possible the infection of the room or its contents, to limit the infection to the room occupied, and to secure such thorough disinfection as to stamp out the disease in situ and to leave no dangerous focus for subsequent occupants of the room. While the different infectious diseases vary greatly in their infective material, there is a certain similarity in the details of the sanitation, and certain precautions which will apply in all cases. It is, therefore, advisable to put a case of infectious disease in a room which is as much separated as possible from the other rooms in the house. It should be warm and sunny and easily ventilated. All unnecessary furnishings should be removed, as curtains, pictures, rugs, extra chairs, etc. An iron bed and such adjuncts as are required should be as plain and unornamented as possible. Over the door a sheet should be hung hoistened with an antiseptic solution of some kind. The nurse should not pass from the room to other parts of the house. Food utensils and other bodily necessities which come into the room should be disinfected before they are removed and the

nurse should not go near other children.

The physician in attendance upon such cases should arrange his calls as far as possible so as not to go from infectious and contagious cases to patients who are not immune, and in his attendance he should use all precautions to prevent any infectious material from finding a lodgment upon his clothes, and so lessen the danger of carrying the disease. He should remain in the room for as short a time as possible consistent with the necessary attention to the patient, and he should not unnecessarily expose himself to the contagion.

On account of the fact that the micro-organisms which produce scarlet fever and the various exanthemata have not yet been isolated, we are unable to apply a scientific test to the fomites of the patient so as to know how the contagion is transmitted. Common opinion, which is often the crystallization of the experiences of many generations, holds that all the discharges from infectious cases are dangerous, though some are undoubtedly more active than others. Thus the pus from a case of otitis media purulenta following scarlet fever is more likely to spread the disease than the urine or feces, or possibly even the desquamated skin itself.

Again, it is recognized that in certain infectious diseases the area of contagion is limited. A child may contract scarlet fever if it comes within a radius of three feet, without any actual contact. And there are cases which show that merely entering the room of a smallpox patient for a moment has given the contagious principle a sufficient time to effect a lodgment and then to produce the characteristic features of the disease.

Ordinarily the physician, remaining somewhat removed from the patient, is without the zone of active infection. In diphtheria unless particles of the membrane, or droplets of the spittle which contain the bacilli, fall upon the physician, there will be no danger of carrying the disease. It is wiser, however, in the severer infectious diseases to wear over the clothing a long apron or a sheet which can be dropped on leaving the room. The face and hands should be washed with an antiseptic solution. Fortunately the physician is out in the fresh air and sunshine all the time and thus utilizes nature's antiseptics, than which none is better. The laity very often comment on the fact that physicians so rarely carry diseases with them and modern sanitarians are advancing the theory at present that most epidemics of the various infectious maladies are spread by the mild cases which go unrecognized rather than by the mediation of a third party. However, the physician should relax none of his efforts to keep himself free from the morbid material, and this is

best attained by wearing some outer covering when seeing such cases, for it is obviously impracticable for a busy physician to be changing his clothes after each visit; and on the other hand, certain contagious elements will cling very tightly to woolen clothes and, therefore, may be carried about. Smallpox especially, of all these diseases, requires particular care on the part of the attendants and physician. The nurse when taking the daily airing should keep away from children, for the nurse, being in contact with the patient, becomes filled with the infection and usually carries in the mucous membranes of the nose and throat more or less colonies of the pathogenic organisms.

The care of the room requires the removal of all unnecessary furnishings before the patient is admitted. Then it must be kept sweet and clean by proper ventilation and the admission of sunlight, which is one of the most potent of all germicidal agents. Then all discharges from the patient must be rendered innocuous. Mucus from the nose and throat, urine, feces, or any other excretion should at once undergo a process of disinfection. The particles of mucus should be caught on a piece of cloth and burned. The urine and feces should have a powerful disinfectant and deodorant applied to them. There are many such advertised, but copperas is cheap and as efficient as most of them when left in contact for a sufficient length of time. Carbolic acid, bichloride of mercury, lime and the various proprietary solutions may be employed. Soiled sheets and other fabrics which come in contact with the patient should be immersed immediately in an antiseptic solution, either bichloride of mercury 1 to 2,000, or a 5 per cent. carbolic acid solution, and then thoroughly boiled. Such utensils and appliances as cannot be made absolutely aseptic should be burned, and in a hot fire which consumes quickly. Plates, cups, etc., should be washed with a strong antiseptic solution before being removed from the room. By these methods the infection can be limited to the room occupied, and there will be no danger of its conveyance to others.

There are certain variations in the details which are applicable to and practicable in hospitals, etc., which would not be suitable for private houses. In public institutions it is not feasible to burn up the clothing and bedding of patients who have had infectious diseases, because the cost of the operation of such a place would be prohibitory. On the other hand, it is perfectly feasible to provide a steam chest in connection with the steam heat, which will furnish the necessary heat for thorough disinfection. In fact, for disinfection on a large scale there is nothing

which is so efficient and at the same time so cheap and convenient as steam disinfection. but this method is wholly inapplicable to private homes, and here we must resort to gaseous disinfection, either with formaldehyde or sulphur dioxide gas. Of the two formaldehyde is by far the most efficient, and now that several firms have put the formaldehyde candles upon the market in cheap and convenient form, it should be used in preference to all others. The penetrating power of the gas is not pronounced so that everything in the room should be spread out and exposed to the fumes as thoroughly as possible. Drawers should be pulled open, clothing and bedding spread out, the pockets pulled out, books and letters opened, etc. The room should then be hermetically sealed, all windows and cracks stopped up; the chimney flue, vents, or openings of any kind closed, and after the gas is generated the cracks in the door should be sealed so that the fumes cannot escape from the room into the house. It is better to burn two or three candles according to the size of the room, as it is much better to have the gas generated rapidly. Formaldehyde has the advantage that it is powerfully germicidal yet will not attack cloth, or metals, or coloring matter. The room should be kept closed for at least twelve hours and then be thoroughly aired. As a further precautionary measure the walls should be wiped down and all woodwork thoroughly scrubbed with soap and then washed off with a five per cent. solution of carbolic acid. It is best to remove the paper from the wall and paper afresh; the woodwork can be repainted, though this is not absolutely necessary. In this way all the foci of the disease will be removed.

Burning sulphur has long had the reputation of being an excellent disinfectant. Homer refers to its use in the Odyssey. When used aright it is very satisfactory, otherwise it is not. It is necessary to prepare the room as above and then generate steam in the room, for dry sulphur dioxide fumes are not germicidal; but by the presence of water the dioxide is converted into sulphurous acid which is strongly germicidal. The rule is to burn about three pounds of sulphur to the thousand cubic feet of air space. There is some difficulty about securing the thorough combustion of the sulphur and some danger from the spittings of the burning sulphur out upon the floor. By moistening the sulphur with alcohol its combustion will be facilitated and by placing the pan containing the sulphur in a tub of water all danger of fire is obviated. Sulphur is put up now in very convenient candles which are more reliable than the crude methods of use.

The disadvantage in the use of sulphur is its bleaching action upon coloring matters in the wall paper or carpet, and its effect upon metals or fine wood stuffs which sulphur fumes attack.

Thorough disinfection should be insisted upon after every case of an infectious disease. It can be attained only by a careful attention to every detail in the processes described above. It is impossible to disinfect a room while the patient is in the room. Such methods are a delusion and a snare. The various pathogenic micro-organisms can withstand any concentration of gas which is not injurious to the cells of the respiratory system except Nature's great disinfectant, fresh air combined with the actinic rays of the sunlight. "Let the blessed sunshine in."

The clothing of exposed individuals can be thoroughly disinfected by being placed in a wardrobe and exposed to the fumes of formaldehyde from a formaldehyde generator, but an hour or two in the fresh air and sunshine will be almost if not equally efficacious.

When a patient has recovered from one of the exanthemata he should have a thorough bath with hot water and soap and then be immersed in a bichloride bath, one part to five thousand, and be thoroughly scrubbed. Even the hair should have a thorough antiseptic shampoo. In this way the patient will no longer be a menace to the rest of the family.

The physician, as stated previously, is not at all likely to carry a contagion, but he should instruct the nurse to keep away from other susceptible people while in attendance upon such cases and to take a thorough bath as described above when she gives up a case, and especially that the clothing worn in the room should only be such as can easily be boiled, and on quitting a case that she have such clothing boiled for at least a half hour. It is the obligation of the physician to educate his patients and to see that thorough disinfection is enforced.

A TEST OF CHRISTIAN SCIENCE.

A bill has been introduced in the Iowa Legislature forbidding Christian Science "healers" to practice their art in the state under penalty of imprisonment in the penitentiary. The introducer of the bill has promised to withdraw it if the Christian Scientists will cure the doorkeeper of the house of deafness. Some of the "healers" are not willing to accept the challenge, but others believe that this is the appointed time to make a great demonstration of their powers in the most public way and propose to organize a concert of prayer and hard thinking for removal of the doorkeeper's belief that he cannot hear.—*Medical Record*.

THE PREVALENCE AND MORTALITY OF SMALLPOX IN COUNTRIES PROTECTED BY COMPULSORY VACCINATION COMPARED WITH SAME IN AMERICA.

By JULIAN T. McClymonds, M. D., Lexington, Ky.

That we may appreciate the smallpox of our day, it is essential that we have some knowledge of the disease previous to the Nineteenth century. Rhazes, 850-932 A. D., a physician of Arabia, wrote the earliest description of smallpox extant—although the disease undoubtedly existed for centuries before this, as a knowledge of it was ascribed to Galen (A. D. 131) by Rhazes.

The frightful devastation caused by smallpox, and the fear and horror in which it was held can be but faintly understood by the present generation.

The disease was first introduced into Europe in the latter half of the Ninth century by the Crusaders returning from Palestine, and rapidly spread over the entire country, following the routes of travel. It was brought to America by the Spaniards in their conquest of Mexico (1520) and slowly extended northward, covering all of North America, including Iceland and Greenland.

The deaths caused by smallpox in these early epidemics seem almost incredible. In Mexico, 3,500,000 died within five years.

Of our North American Indians, 6,000,000 are estimated to have lost their lives.

Greenland lost 70 per cent. of its entire population, and in one year Iceland lost 18,000 out of a population of 50,000. In Europe the disease made frightful ravages. In the Eighteenth century, according to Bernouilli's estimate, 60,000,000 succumbed to this disease alone.

In London up to the middle period of the nineteenth century, faces pitted by smallpox were the rule, and a smooth skin was so much the exception that it was given in the description of criminals. Dr. Black, in 1747, wrote: "Very few of the human species escape smallpox, especially in populous towns and cities where there is always variolous fuel."

In Colonial times, smallpox was very prevalent, especially in our coast towns and cities—for example Boston, in 1721, with a population of 11,000, had 6,000 cases with 850 deaths; nine years later, 4,000 cases with 400 deaths; again in 1752, 7,669 cases and 569 deaths.

It cannot be doubted that previous to the adoption of vaccination smallpox was the greatest scourge of the human race, especially when we remember that it was primarily a

disease of childhood, and that countless numbers of those escaping with their lives were left mutilated or blind, so that death would have been the less evil.

Self-preservation is a fundamental law, and for hundreds of years war was waged to check the inroads of this disease; but in so far as preventing infection, all the knowledge that science, hygiene, and medicine had acquired was of little or no avail.

Progress had however been made in lowering the mortality by the practice of inoculation. This originated in China, at a time too remote for written history.

From a recent report of the British expedition to Thibet, it appears that in this little known country, where vaccination is unknown, isolation and disinfection by incineration have met with some success in restricting the disease. The writer says: "The smallpox, when it appears among them, is a disease that strikes them with too much terror to admit of their treating it properly. Their attention is not employed in saving the lives of the infected, but in preserving themselves from the disease. All communication with the infected is strictly forbidden, even at the risk of being starved, and the house or village is afterward erased." At one time the capital city, Lhasa, was abandoned for two years on account of an epidemic.

The last years of the eighteenth century marked the downfall of the King of Plagues, and with the introduction of vaccination a new era began. Previous to this, smallpox had been a disease from whose infection escape had been all but impossible. It now became and has remained a disease that can be acquired only through gross ignorance or criminal carelessness.

The first vaccination was not performed by Jenner, but by Benjamin Jesty, a farmer at Dorsetshire, England, who in 1774 (twenty-two years prior to the vaccination of James Phipps) vaccinated his wife and two sons with cowpox. Fifteen years later the sons were inoculated with smallpox, not contracting the disease. It remained, however, for Edward Jenner to recognize the far reaching importance of vaccination, and to make his knowledge known to the world. Within four years after the publication of Jenner's book in 1798, vaccination had been introduced into every country of the civilized world.

A comparison of post-vaccination with pre-vaccination statistics, shows remarkable changes, this being especially true in countries where compulsory vaccination is rigidly enforced.

In England, from 1728 to 1757, the annual death rate per million inhabitants from small-

pox was 4,260. With optional vaccination from 1838 to 1854 it fell to 430. From 1872 to 1894, with enjoined vaccination, the rate was only 86—a decrease of nearly 98 per cent.

In the face of these facts, Parliament August 12, 1898 passed the so-called "conscience clause," practically doing away with compulsory vaccination.

The law reads as follows:

"No parent or other person shall be liable to any penalty under the vaccination act, if, within four months from the birth of the child, he satisfies two Justices, or a Stipendiary, or a Metropolitan Police Magistrate in petty sessions, that he conscientiously believes that vaccination would be prejudicial to the health of the child, and within seven days thereafter delivers to the vaccination officer of the district a certificate by such Justice or Magistrate of such conscientious objection." In less than five months 230,147 of these certificates were issued. This could mean but one thing, an increased death rate.

The results obtained in Sweden were even more convincing. From 1774 to 1801, the latter being the year vaccination was introduced, the deaths were 2.045 per million. With optional vaccination, from 1802 to 1816 408 per million. With compulsory laws from 1817 to 1884, 77 per million. From 1884 to 1893, with better laws and rigid enforcement, the rate was from 0.2 to 5. per million.

In the German Empire vaccination has all but reached perfection, the following laws having been enacted and in force since 1874: "Every child must be vaccinated in the calendar year which follows the year of its birth, unless the physician certifies that the child has had smallpox." "All pupils of public or private schools, (Sunday and evening schools excepted) must be vaccinated in their twelfth year, unless they have had smallpox, or have been successfully vaccinated within five years." "All vaccinated persons must present themselves for examination, not earlier than the 6th day, and not later than the 8th day after vaccination." Vaccinations are done in March and September.

The only objection to this law is that a child, if born in January, may be 20 months of age before being vaccinated; and in 1899 fourteen out of the 28 deaths were unprotected infants. How well the law has succeeded can be seen from the fact that the death rate fell from 309 with optional vaccination to 15 per million, and for the past fourteen years it has never exceeded 7.

The German Board of Health in 1901 published in their report the following table, showing the frequency of smallpox in Ger-

many compared with other European countries: (the German death rate is taken as the unit).

	1893	1894	1895	1896	1897	1898	1899
Switzerland	8	96	3	17		25	
England	24	108	19	23	16	4	42
France	34	261	201	1176	123	22	231
Austria	67	132	28	177	247	121	67
Belgium	158	145	25	57	21	86	174
Holland		640	81	147	7	5	
Germany	1	1	1	1	1	1	1

Thus the death rate in Switzerland in 1893 was 8 times as great as in Germany for the corresponding year, etc., etc.

Previous to the close of the Chinese-Japanese war smallpox epidemics in Japan were of frequent occurrence. At the close of the war vaccination was made compulsory, and to-day the disease is practically unknown, there having been in 1901 but one case reported in Japan. Smallpox in Cuba, under Spanish rule, was one of the most fatal diseases; for example, Havana in 1887-1888 had 20,000 cases, with 2,255 deaths. With the American occupation, vaccination was enjoined, and the work has been ably continued by the Cuban Government through the central bureau of vaccination, whose report in 1903 showed 300,000 successful vaccinations and not a case of smallpox on the island.

Similar conditions existed in Porto Rico, the annual death rate for the island being 621 for 10 years before its annexation by the United States. Vaccination was made obligatory in 1899 and since that time, not more than two deaths have occurred in any one year from smallpox.

In the United States, owing to the non-enforcement of our laws relative to vital statistics, an accurate knowledge of smallpox cannot be obtained. That the disease is very prevalent is well known. There is never a time when it is not epidemic in many parts of the country, and each year it numbers its victims by hundreds. From a report (and it falls far short of the actual conditions) of the U. S. Marine Hospital Service, we find that from Dec. 28, 1900 to Jan. 31, 1901, there were 4,359 cases and 65 deaths. For the same period the following year, there were 11,015 cases and 253 deaths in the United States.

In Philadelphia from 1901 to 1903 inclusive, there were reported 665 deaths.

In the recent outbreak in Kentucky, according to the report of the Secretary of the State Board of Health, there were 11,700 cases with 191 deaths, and only the extreme mildness of the epidemic can account for the low mortality.

These are but examples of the epidemics which are continually occurring, and will con-

tinue to occur until all are rendered immune by successful vaccination and re-vaccination.

When we consider that our death rate from smallpox for a little over one month was far in excess of the combined annual death rate of Germany, Holland, Sweden, Japan and Porto Rico, it is clear that the United States has failed in protecting its people from smallpox, by enacting and enforcing laws for compulsory vaccination.

DIFFERENTIAL DIAGNOSIS OF SMALLPOX.

By J. I. WHITTENBERG, Superintendent and Physician St. John's Eruptive Hospital, Louisville, Ky.

Variola is perhaps as generally dreaded as any disease known to the profession; yet diphtheria, phthisis, typhoid fever, and many other diseases show a much higher rate of mortality. Probably no other disease is so little understood by laity and the profession generally as is smallpox. The profession at large has but little opportunity to study the disease clinically, since the diagnosis is no sooner made than the patient is removed to some place set apart for the purpose of caring for such patients. Hence, the question of diagnosis is the one which especially interests the general practice.

The disease has such a wide range of severity that no fixed set of rules can be laid down by which a positive diagnosis can always be made. The several types of smallpox, viz: varioloid, so coalesce as to cover hemorrhagic smallpox, so coalesce as to cover every degree of severity, from the varioloid, with barely a half dozen pustules, to the almost inevitably fatal hemorrhagica, with nearly a hundred pustules to every square inch of integument and mucous membrane.

The period of incubation, which is usually about fifteen days but may vary from ten to twenty days, may be of some aid in making the diagnosis when a history of recent exposures can be elicited.

The prodromes of the disease vary from a scarcely noticeable condition of malaise, ushering in a varioloid or a discrete variola, to the hard chill and fever, accompanied by intense pain in the head, neck and back, and to some extent over the entire body, which are the beginning of a more severe attack. This initial fever ranges from 102 F. to 106 F. and in all but the malignant and hemorrhagic types subsides on the fourth day with the appearance of the eruption. In the most severe forms the fever does not abate but continues to rise until about the tenth or eleventh day when death results from exhaustion; during this time there are subsultus tendinum, hemor-

rhagic dysentery, and all the train of symptoms which indicate the presence in the circulation of a virulent poison.

The eruption is the only positively diagnostic symptom of the disease. This makes its appearance upon the face and head, usually about the fourth day, as minute maculae. These may be felt under the skin as hard, round bodies even before they can be seen. This eruption makes its way downward, appearing in a few hours upon the neck and chest, then the back and arms are covered, later the legs, and last of all the hands and feet. All of the eruption goes through the several stages of macule, visicle, and pustule, consecutively, and by the time the eruption makes its appearance on the hands and feet that upon the face has reached the pustular stage, some even being umbilicated, so that every stage of the eruption may be seen at one time.

The eruption is typical of smallpox. Unlike other eruptions, it is deep seated, being entirely under the true skin. This differentiates it beyond a doubt from varicella (chickenpox), which forms between the epiderm and the derm. Be the eruption of smallpox ever so light there are almost without an exception some vesicles on the palmar surface of the hands and fingers, and on the plantar surface of the feet.

This is never seen in any other eruptive disease, except in very rare instances when from some cause the epiderm in these regions is not thickened; varicella may then appear here. This eruption, therefore, in the ordinary individual would be almost pathognomonic of smallpox.

The typical vesicles of smallpox are of a symmetrical form, being almost perfect circles and of an almost uniform size. The eruption of chickenpox is the reverse, being irregularly shaped and of unequal size. The most typical eruption of smallpox is that which appears upon the flexor surface of the forearm, and as this appears early it is important to remember this in order to make an early diagnosis. The eruption of smallpox is found also on the mucous surface in the mouth and throat, causing sometimes great difficulty and pain in deglutition. This is an important diagnostic feature, as it is very rare in any other disease of this class. Fortunately for the patient this eruption which presents on these parts the appearance of ulcers, disappears very rapidly on account of the vascularity of the parts. This eruption on the mucous membrane must not be confounded with the bright red spots on the buccal mucous membrane in rubeola.

The elimination is easily made from the fact that this is the first of the eruption to ap-

pear in measles, and disappears as the mottling of the skin makes its appearance, while in smallpox the eruption in the mouth is simultaneous with that on the face.

The diagnosis from measles is easily made by the absence of coryza. The eruption of measles also differs widely from that of smallpox, being papular, and never becoming vesicular or pustular.

The eruption of herpes zoster sometimes resembles smallpox very closely, but may be distinguished from it by its being in groups corresponding in location to the nerve-trunks. Herpes is almost invariably unilateral, affecting usually only one nerve-trunk and its branches.

The eruption which is perhaps most difficult to diagnose per se from smallpox is that produced artificially by the local application of croton oil. Fortunately this is very rarely met with, but it is sometimes very important that the diagnosis be made at once. As this drug is frequently applied in the form of a linament, to rheumatic joints, it may in such cases be identified by its appearance in these regions, and nowhere else. In many prisons and asylums the application of croton oil to the genitalia is practiced upon inmates to prevent masturbation. In these cases also the localization of the eruption to these parts will clear up the doubt. The most puzzling cases are those in which the patient uses the croton oil with the intention of deceiving. This is sometimes done by the inmates of prisons in the hope of thereby gaining their release. Most of the other symptoms can be feigned, and with the means of producing the eruption only the closest observation will expose the trick. The vesicle thus produced has very much the appearance of the variola vesicle, but unlike the latter it is under the epiderm, lying between the two layers of the skin. It, of course, never becomes pustular, but usually there is no time to wait for this development. The punishment is too severe for even the most heroic to apply the croton oil to the entire body surface, hence the eruption is not well distributed like smallpox.

The mucous membrane also escapes the artificial eruptions for the same reason. Smallpox is found on all parts of the body including the palpebral and bulbar conjunctiva, sometimes attacking even the cornea itself. Occasionally the smallpox pustules appear under the finger and toe-nails.

Syphilis (tertiary) is sometimes mistaken for smallpox, but can easily be distinguished from it by the absence of the premonitory symptoms. The eruption of syphilis, the gumma, contains a caseous material very different from the pus in the smallpox pustule, being of a thick "gummy" consistency.

If all these points are borne in mind, smallpox can almost invariably be diagnosed by the elimination of all the similar eruptive diseases and many mistakes be avoided.

THE OPERATION OF VACCINATION.

—HOW IT SHOULD BE PERFORMED TO BE THE MOST EFFECTIVE AND LEAST DANGEROUS—IMPERFECT METHODS AT THE HANDS OF PHYSICIANS RESPONSIBLE FOR FAILURE OF PROTECTION—BOVINE AND HUMAN VIRUS FOR VACCINATION PURPOSES.

By ARCH DIXON, M. D., Henderson, Ky.

The time is past and buried in the grave of "dead yesterday" when it was necessary to make an argument as to the efficacy of vaccination to prevent smallpox. When I say that vaccination, true vaccination, repeated until it will no longer "take", always prevents smallpox and nothing else does, I make an assertion which defies controversion and one which is endorsed by the regular medical profession of the entire world.

I may go further and say that true vaccination—that is vaccination properly done, on a clean arm with pure virus and kept perfectly clean and unbroken afterward—never did and never will make a serious sore. Furthermore, that such a vaccination leaves a characteristic scar, unlike that from any other cause, which is recognizable during life and is the only conclusive evidence of a successful vaccination. Also, that no untoward results ever follow such vaccination; on the other hand thousands of lives are annually sacrificed through a neglect begotten of lack of knowledge.

In the whole domain of medicine there is no operation so simple and so safe as vaccination, when properly performed and cared for. There is no simple operation in which such serious results follow carelessness and ignorance, even to death itself, either as a direct result through the needless infecting of the vaccination sore, or from smallpox through failure to secure a successful protective vaccination.

How vaccination should be performed to be most effective and least dangerous: It must be understood first of all that the operation of vaccination is a surgical operation, and should be performed with the same care for the prevention of infection as governs any other surgical procedure. The vaccination should be made with clean hands, on a clean arm, with pure lymph and should be kept perfectly clean and unbroken afterward. Each one of these points is essential to a protective vaccin-

ation and to freedom from serious soreness, viz: the utmost attainable cleanliness, absolute purity of the vaccine virus, and an unbroken surface, which prevents all danger of contamination from external sources, the atmosphere, clothing, soiled hands, etc.

To be more specific on these points, the arm should be rendered as nearly surgically clean as soap and water can make it. Do not use alcohol or witch hazel. The arm should be grasped up close under the axilla with the left hand of the operator and compressed sufficiently to make the skin on the outer arm tight; then with a double fold of aseptic gauze, or one thickness of a freshly ironed towel over the end of the index finger of the right hand, the scarf skin down to the true skin should be rubbed off at the point of selection for the deposition of the lymph, usually at the insertion of the deltoid in the male and higher up nearer the shoulder in the female. The area exposed by removal of the scarf skin should not exceed an eighth or at most a quarter of an inch, and should be done so carefully as not to draw blood. The lymph should then be applied over the denuded surface and gently rubbed in. Nothing should be permitted to touch the point of vaccination for several minutes until it is thoroughly dry and becomes glazed, thereby hermetically sealing the sore from outward infection. A piece of clean gauze, or clean, soft muslin, or a clean handkerchief should then be pinned to the undershirt so as to hang loosely over the spot and prevent the clothing from rubbing it. This should be changed for a clean one every day until the scab comes off and the surface is healed.

The utmost care should be taken to prevent the breaking or injuring of the vesicle and resulting scabs in any way, and the arm and its coverings should be kept scrupulously clean from the time of the vaccination until it gets well. My own experience teaches me that the protection afforded by the loose gauze, or muslin, is superior to that of any shield, bandage, plaster or other dressing. It cannot be repeated too often that the greatest care should be taken to prevent any breaking of the surface from the time when the abraded spot has dried until the scab drops off naturally. The unbroken surface is nature's own "shield" against the access of disease germs. The sore should not be rubbed or scratched, and the gauze or muslin should never be changed with dirty hands.

The manifold uses of gauze in surgical work suggested to me its employment in vaccination, and for the past two years, during which time I have used it, I have had fewer

failures to "take" and a smaller number of sore arms than ever before.

This method will be found to have several advantages over the older one of scratching with an ivory point, or needle. There is very little, if any, pain, there is no blood and with children the fear of being hurt is done away with for the operation can be done as part of the cleansing process and the child is vaccinated before it thinks you have begun. I have vaccinated sleeping babies in this way, without awakening them. Sterilized gauze can be taken with the operator, or a clean freshly ironed towel can be had in almost any house.

Vaccination performed in this way will, if the person be susceptible to smallpox, generally "take" and will always leave the characteristic and typical scar, which is the permanent and only conclusive evidence of a successful and thoroughly protective vaccination. It should be remembered that no one is insusceptible to vaccinia, or vaccination, any more than to smallpox, and that one successful vaccination can be secured in every person; to this there is no exception. The protection of vaccination against smallpox may be positively determined for each individual by repeating the operation from time to time. If the vaccination is still protective, a re-vaccination will not "take".

If it does "take" it is proof positive that the person could have taken smallpox if exposed to its contagion.

The only rule is to repeat vaccination until the susceptibility to vaccine is exhausted. When this is accomplished it is impossible to contract smallpox.

Imperfect methods at the hands of physicians and others are responsible for failure of protection: I could cite a number of authorities and much evidence to show that vaccination as ordinarily performed is in a large number of cases totally ineffective, and that it leads to a false sense of security among many persons who imagine themselves or their children protected against smallpox, simply because they have had their arms scratched and made sore.

I regret to say that physicians employed by corporations to do general vaccination, or house to house vaccination, are especially prone to be careless about the work. The proper precautions are not taken to prevent infection by the observance of aseptic methods, or by bloody and wholly unnecessary exposure of the absorbent surface. They fail to impress upon parents the necessity of keeping the sore clean, and the prevention of breaking the surface of the sore by scratching with dirty nails or rubbing with soiled clothing. In many cases those vaccinated are not seen again by the operator and the slight soreness

produced when it does not "take," or the serious soreness which invariably follows mixed infection and destroys the effectiveness of the virus, is taken by the family as a successful and protective vaccination.

I have seen hundreds of children with large slick scars, with no resemblance to the typical vaccination scar, whose parents were sure they were successfully protected because their arms had been *so sore*. In each and every case of this sort I have ordered revaccination, which generally "takes." Many times revaccination is flatly refused and the doctor spoken of as a grafter who desires to get pay for a totally unnecessary procedure,—one more reason why the primary operation should be carefully done. Again this careless method of vaccination has a tendency to degrade and belittle the operation in the eyes of the laity, which has come to believe that parents, druggists, barbers, midwives, nurses and old women are competent to vaccinate and to pronounce upon the sufficiency of the vaccination. It also causes an increasing loss of faith in the protective power of vaccinia, because so many of those believed to be vaccinated are subsequently attacked by smallpox.

In all cases where it is possible vaccination should be done by the family physician. If it becomes necessary to employ public vaccinators, competent men should be selected who can be relied on to conscientiously perform their duty.

I do not subscribe to the instructions of the State Board of Health to insert the lymph in not less than three different places.

Vaccinia is a distinct disease and one inoculation is as efficacious as a greater number; it does not require multiple chances to cause syphilis, nor does it require two or three insertions of virus to produce vaccinia. Jenner himself, over one hundred years ago, said that "a single pustule is sufficient to secure the constitution from smallpox." It was true then, it is equally true to-day.

The cardinal principle of vaccination is: vaccinate early and often, and the sound judgment and professional experience of the vaccinator must be employed in each individual instance of the following inhibitory condition: Weak, feeble or sickly infants, those presenting evidences of pronounced disorders of nutrition, or of functional disturbances as from dentition, indigestion, diarrhoea, or other bowel affliction; or presenting chafed or abraded cutaneous surfaces on any portion of the body, or any form of cutaneous eruption, or during the period of weaning, should not be vaccinated except in the presence of smallpox contagion. Acute febrile diseases and intestinal and cutaneous, especially vesicular,

affections tend to modify and complicate the vaccinal action, and these conditions, therefore, warrant the postponement of the operation, but only until they have subsided. The existence of erysipelas, diphtheria, or scarlet fever on the premises or in the immediate vicinity, renders great care necessary, if indeed it should not positively forbid the operation. Recent exposure to these diseases also makes it advisable to postpone until after the period of incubation.

As already intimated, however, there are few, if any, conditions which would justify a neglect or even postponement of vaccination in the presence of smallpox contagion.

Bovine and human virus for vaccination purposes: which? It is of the first importance to use a potent and pure vaccine—personally I prefer the lymph in hermetically sealed tubes—and this can only be had by employing bovine virus. One can never be sure that human virus is either potent, pure, or safe. A gentleman was once travelling on a large New Orleans boat and was requested to take a hand in a game of poker, to fill up the game. He said there were sixteen reasons why he could not do so: on being asked to name the reasons he said, "The first one is, that I haven't any money;" he was told that he need not give the other reasons as the one given covered the entire ground. There are sixteen reasons why I would not use human virus for vaccination purposes. The first of these is that the people would not permit me to use it and would bring an action for damages against any one who did use it. It is unnecessary to cite the other fifteen reasons.

Uniform vaccination, performed as indicated in the foregoing remarks, will give uniform results, and a "certificate of successful vaccination" is warranted and should be issued only when the resulting scar or cicatrix is not less than one-third of an inch in diameter, characteristically pitted and perfect in outline.

In the preparation of this article I have drawn freely on "The Rules and Regulations" concerning vaccination of the Department of Health of the cities of Chicago and New York.

* The rule of the State Board of Health prescribing vaccination at not less than three different places is based on statistical observations and experiences in several foreign countries, notably Germany and Japan. Loomis' Practice of Medicine, 1895, (page 779) gives the following table in support of this contention:

In twenty years the London Smallpox Hos-

pital gives the following definite statistics:

	Cases Admitted.	Mortality.
A. with one scar	2001.....	7.7 per cent.
B. with two scars	1446.....	4.7 "
C. with three scars	518.....	1.9 "
D. with four or more scars.....	544.....	½ "
E. said to have been vaccinated, but no scar visible.....	370.....	23 1½ "
Total cases admitted	4879	

EDITOR.

CONTRIBUTION BY THE KENTUCKY STATE BOARD OF HEALTH: RULES AND REGULATIONS FOR MANAGEMENT OF SMALLPOX, ETC.

SMALLPOX.

This paper is addressed especially to the medical profession of Kentucky because the Board believes that after more than six years' experience with smallpox, that the profession is largely responsible for the fact that fully fifty per cent., and in the country probably over eighty per cent. of our people are unprotected by vaccination. Nearly every family has its regular physician, who is its oracle, trusted and respected in everything relating to medical matters, and in our judgment that family physician has been almost criminally negligent who has not taken advantage of his opportunity and influence to explain the harmlessness of vaccination if properly done with fresh virus, on a clean arm, with clean hands, and to insist upon it as essential to the protection of that family and the community.

In the ante-bellum days in the South, no inconsiderable part of the income of the physicians in town and country came from the systematic vaccination insisted upon and practiced in the families of master and slave alike, and between duty and self-interest everybody was vaccinated. He had the scabs saved from the healthy children and young women, and wrapped them up and guarded them as carefully as he did his gold, always carrying them in the top of his saddle pockets so that they would not be spoiled by the heat from his body. Not being so far removed from the day of malignant epidemics of smallpox, he recognized to its full the value of the discovery of Jenner, lived up to his faith, had the courage and self respect to charge for the service, and all concerned were benefitted.

The subject of humanized virus will be referred to later on, but the Board urges that every physician in Kentucky make a careful study of the facts and explanations contained in this paper, in connection with the cuts, that this number of the *Journal* be preserved for future reference, and especially that systematic vaccination at three points on the arm

be insisted upon for every member of every family in his practice, rich and poor, black and white, to the end that this loathsome disease, a calamity to any family and community even in its mildest form, may be known only in the history of our State.

Although smallpox has been stamped out over and over again in nearly every county in Kentucky within the last five years, this board has official information that the disease has again appeared in several widely-separated sections. It is also prevalent in adjoining States, and everywhere manifests a tendency to break over official control and assume an epidemic form.

Since January, 1898, smallpox has prevailed, more or less extensively, in every county in this State, with a total of 21,616 cases and 300 deaths, and costing in cash from our county and municipal treasuries, as gathered from official reports, the immense total sum of \$515,775, and an estimated loss from interference with business and travel of \$1,227,435. Judiciously expended, this would be more than enough to keep every person in Kentucky thoroughly vaccinated for a generation, so that the existence of anything but an imported case of smallpox would be an impossibility.

In spite of this, it is estimated that over fifty per cent. of our people, and in many counties and country districts over ninety per cent, have never been vaccinated. An imported case, and especially a mild and easily overlooked one, who can go around freely all the time, or after the eruption appears and the fever subsides, and visit his friends and kin, is like a spark in tinder, and such a case usually means an epidemic, which spreads by a repetition of these conditions, often skipping to distant communities and counties. Usually the disease has been mild in form, but in Mason, Fulton and some other counties and sections it has been very severe, as it has in Indiana, Ohio and Massachusetts, where the death rate has been high. It is a loathsome disease at best, and at any time the mildest cases may communicate it in the severe form.

As we are likely to have disastrous and expensive epidemics until vaccination is systematically and thoroughly done, this board feels it to be a duty to again warm our profession, officials and people that active steps should be taken at once, and in an intelligent and comprehensive way, to guard against the disease. Fortunately, the method of prevention is as safe and certain in its action as it is cheap and easy to obtain. Vaccination and re-vaccination, properly done with reliable virus, is a certain preventive, and is free from danger. This is the conclusion of the scien-

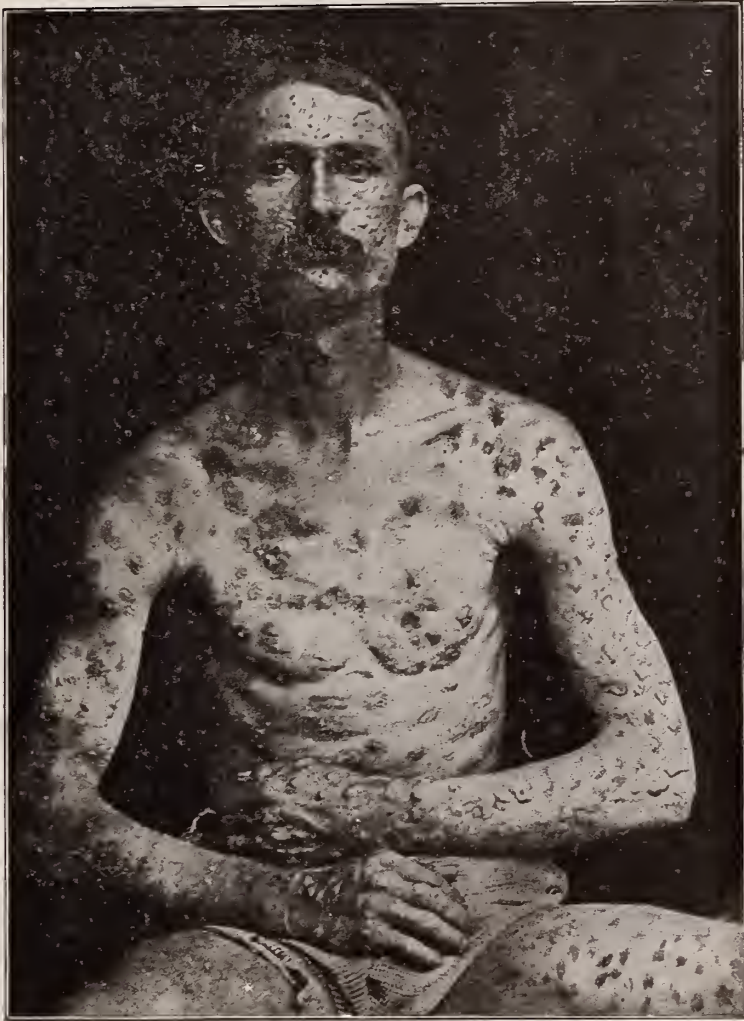


Figure 1—A very common form of mild Smallpox. A Clay County Case.

tific world, after large experience and full investigation, and may be confidently relied upon.

Vaccination should always be done by a competent physician, at three points an inch and a half apart, on a clean arm, thus:



It is important that the person should be seen by him, from time to time and he may know that a perfect result has been secured. Though simple and painless, it is one of the most important operations that one can ever have done, as imperfect or spurious vaccination can only mislead and give rise to a false sense of security. Failure of the vaccination to take only means that the virus was

inert, and is no evidence that the person will not take smallpox, as is commonly believed. Varioloid may occur in persons partially vaccinated, but it has been demonstrated by the experience of thousands of observers, under the most diverse and trying exposures and tests, that a thoroughly vaccinated person will not take smallpox, although living and sleeping in the room with it. It follows that this dreadful scourge would be immediately and permanently stamped out if vaccination should be promptly and universally practiced.

It is unlawful to remain unvaccinated at any time, but in the face of existing conditions, intelligent people should not wait for the law to force them to an evident duty. Physicians, health and school boards, town trustees and fiscal courts, and corporations and



Figure 5—More Severe. Contracted from a very mild case.

business people everywhere, should co-operate systematically and earnestly in providing and requiring vaccination for all within their respective jurisdictions, or in their employ. The business men in many places, especially in the smaller cities and towns, where facilities for caring for cases of this disease are usually inadequate, have suffered, and are continually liable to suffer, incalculable loss from outbreaks which paralyze their trade and which can only be certainly prevented by general vaccination. The law is ample to secure this, and the time has come for its uniform enforcement, by persuasion if possible, but by legal process where persuasion, kind explanations, and pleas for the public welfare fail.

Every precaution should be taken to procure fresh, reliable virus, and to see that it is kept in a dry, cool place. All modern vaccine farms are well kept, and the virus on the market may be relied upon when fresh, but much of it supplied to physicians has lost

its value because it is not kept cool in transit, or in storing. It is not impure, but simply inert, or has at least lost much of its protective value. For these and other reasons which will be given, the board prefers and recommends the use of humanized virus, especially in the country districts, where the family physician can select it himself from the arms of healthy children and young girls. It is more certain to take, causes less local and constitutional disturbance, and is believed to give better and longer protection. If the scabs are wrapped in tissue paper, sealed up and put in a dry cool place, they can be kept almost indefinitely. By its use physicians in the small towns and country districts can practice vaccination continuously, at little expense, as was done in former days all over this State when everybody was vaccinated, physicians thus always having a stock of virus on hand. In many sections it is quite impracticable to do this where bovine virus is the sole dependence, under present methods of

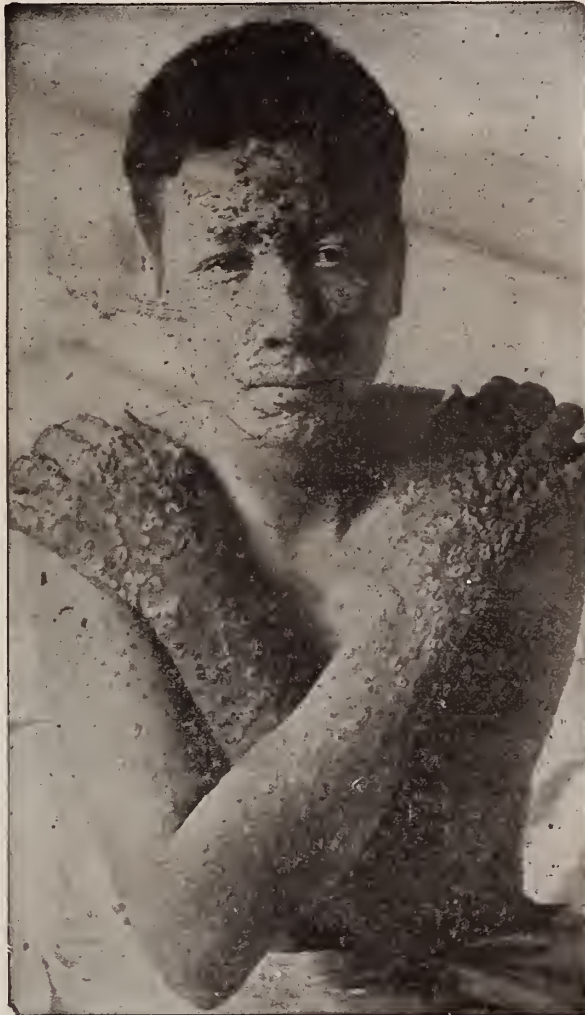


Figure 7—Umbilicated Stage. Mild.

distribution. It is now believed that the cry against the use of humanized virus is almost entirely commercial. Certainly we had as good results, and less opposition to vaccination, under its use, and it appears necessary to return to it in order to bring protection within the reach of our people in the country districts.

Next to the difficulty in getting the people vaccinated, the failure of physicians to recognize, report and properly isolate first cases has caused most trouble in management. Ignorant and obstinate officials and communities usually get their first bias and inspiration from some equally ignorant or obstinate doctor. This can be accounted for readily when it is remembered that the country was so long free from smallpox that a generation of medical men were in practice, few of whom had ever seen a case, or had even had any college

training on the subject. Then, too, the disease has usually been attended by so little fatality as to subject those who made mistakes in diagnosis to little risk of criticism. For these or other reasons, often under the pressure of short-sighted merchants, many who had no training or experience on the subject were ready to dispute the diagnosis of experts as to typical cases, and even to encourage their credulous followers to conceal cases or otherwise embarrass and hinder the difficult and often thankless work of the health officials in stamping out the disease.

There might be difficulty in making a diagnosis during the first days, under some circumstances, but when smallpox is epidemic all over the country, and all have reason and warning to be on the lookout for cases, or even for suspicious symptoms, there is no longer any excuse for physicians who fail to

recognize the disease, and to cordially co-operate with the authorities in preventing its spread. Excluding chickenpox, which is essentially a disease of childhood, it does not look like anything else, and the symptoms point to nothing else. The pain in the back; the hard, shot-like papules, appearing first in the edge of the hair on the forehead, and then on the wrists, and all the time more abundant on the face and other exposed portions of the body; the disappearance of the fever and feeling of relief when the eruption appears, and the regularity of the successive stages of the eruption, taken all together, make a picture never to be forgotten by a careful observer. The fact should be emphasized, over and over again, too, that adults almost never have chickenpox. When unvaccinated, grown people have a contagious eruptive disease, under existing conditions, they should be isolated, and at least reported as suspicious, until some competent authority decides that it is not smallpox. It should be constantly borne in mind, also, that there are no such diseases as "elephant itch," "African itch," "army itch," "cedar itch," or "Cuban itch," but that these are "nigger names for smallpox." In all of the hundreds of instances where the disease was reported under these and other misleading designations, our expert inspectors have found only genuine and unmistakable smallpox.

As an aid to the inexperienced, and as a means of education to the public, cuts are incorporated in this paper representing the various types and stages of the mild form of smallpox now prevailing so extensively. Frequently all of these types and stages are found in the same house or locality. All of these people were unvaccinated. But for the expense involved, these pictures might be multiplied indefinitely, from photographs sent in by our officials from all sections of the State. Bad as these pictures look, they represent little of the real horrors of the disease, and yet scores of cases like these, and as well marked, have occurred in almost every county in Kentucky and been misnamed and disputed by inexperienced physicians. These cases do not look mild to an inexperienced person, but, except in the aged and intemperate, little fatality occurs as a rule, and little pitting or other trace of the disease is usually left after a few weeks.

The law plainly requires physicians and heads of families to report all cases of smallpox or other communicable diseases to their respective county or municipal boards of health within the first twenty-four hours, and that they shall obey the rules and regulations of such boards relating thereto, and ample penalties are provided for failure to do so.

The law also gives such boards full authority to provide hospitals, physicians, nurses, guards and all other things needful in managing and stamping out the disease at the expense of the county or municipality, where the persons afflicted are indigent, and this authority has been sustained and even extended in frequent decisions of the court of appeals. It is greatly to be desired in the interest of economy and harmony, as well as because it is a matter of common concern, that the health and fiscal authorities shall work together hand-in-hand, but it is important that the former should be advised as to their rights in the matter when a disagreement is unavoidable, and, in the presence of a grave



Figure 9—The mildest form. Very common and most dangerous to the public, as it might be easily overlooked or mistaken for something else.

public danger, not to hesitate in exercising them.

When its true nature is recognized early smallpox is the easiest of all contagious diseases to stamp out. When it spreads beyond the first case, or, at most, beyond the first family, somebody has violated the law and is seriously to be blamed. All cases should be immediately and rigidly isolated, in the county or municipal hospital if possible, and the house in which the disease exists, or from which it was taken, should be flagged or placarded, and guarded, unless in trustworthy



Figure 10—A Case of moderate severity. Might have been contracted from a case like Figure 9.



Figure 3—An Owen County Case. Mild.



Figure 11—A very common form of mild Smallpox. A case like this would be confined to bed but 3 or 4 days.

hands, until it has been systematically disinfected, and officially released from quarantine. Every member of the household, and every other person who has been exposed to the disease, should be traced out, vaccinated in three places, and kept under observation for sixteen days, or until the vaccinations have taken well. If any exposed person has gone away, or afterwards makes his escape, immediate notice of the facts should be sent to the health officer of the jurisdiction into which he has gone.

The rules here laid down appear easy and simple on paper, but their effective enforcement when smallpox breaks out in a settlement of negroes, or the class of white people who neglect vaccination, and consequently have a monopoly of smallpox, and especially when the situation is complicated by ignorant or contentious doctors, and selfish business men, who vehemently assert that it is not

smallpox, and a fiscal court which hesitates and hinders where immediate and decisive action is so important, will fully test the patience, firmness and tact of the most experienced and judicious health officials.

Fortunately more and more of the fiscal officials and intelligent people are recognizing the necessity of enforcing the law at the outset as a means of minimizing the expense and trouble of management. Most of our county and municipal boards are having distinctly less trouble in securing moral and financial support than in former years. If this could be further developed so that the precautions herein suggested could be effectively enforced throughout Kentucky for six weeks we would have no smallpox. If successive generations were systematically vaccinated we should never have any more smallpox.

TUBERCULOSIS.

Tuberculosis is the most common and fatal disease with which the people of Kentucky are afflicted. It produces more than twice as many deaths as any other disease, causing one death out of every seven in this State.

As it is now definitely known to be a communicable germ disease, a large part of this sickness and mortality can and ought to be prevented. Careful and extended investigation and observation has demonstrated that the chief source of danger is from the sputum or expectorated matter of consumptives, which contains the germs or seed of the disease in countless numbers, and that such sputum is especially dangerous after it has dried. The germs may be constantly found in the air and dust from the carpets, walls and furnishings of rooms occupied by consumptives, where every precaution is not taken to collect and disinfect such sputum as fast as it is expectorated. Most patients constantly re-infect themselves by failing to destroy their own sputum, and other susceptible persons inhaling the air of such rooms are exposed to constant and serious danger. This is none the less true because the disease may not develop so that it can be recognized for months or even years. These dangers exist to a less extent also in cars, public buildings and rooms frequented and infected by careless consumptives.

Being confident that consumption could be practically exterminated if the medical profession and people could be made to realize the importance of destroying the sputum from every one afflicted with the disease, the following rules have been prepared with care, and should be disseminated, and, as occasion requires, observed by all afflicted persons and families, and all others interested in the public welfare.

1. Every person who has an habitual cough and expectoration should have a microscopical examination of the sputum made to ascertain if it contains the germs of consumption, until this can be done, or if the germs are found, all the sputum should be carefully and systematically collected and destroyed, or disinfected, for his own protection, as well as that of others.

2. Every part of the sputum should be received upon soft paper and promptly burned, or into cuspidors containing a solution of chloride of lime, four ounces to a gallon of water, or other disinfectant of equivalent strength, and such cuspidors should be washed daily in boiling water. Cuspidors in hotels, cars and other public places, used by consumptives, should have similar care.

3. The room occupied by the afflicted person should be large and well-ventilated, with an open fire-place if possible, and no other person should remain or sleep in the room, unless all the sputum is collected and destroyed with great care. However, if this is carefully and intelligently done, others may share the room in safety.

4. It is important that consumptives should live in the open air and sunlight as much as possible, and that they should be taught to spit upon small pieces of cloth or paper, or use a pocket cuspidor, and destroy the sputum at the first opportunity. They should especially be taught not to spit upon the floor of any public or private building.

5. Weak and broken-down people are especially vulnerable to the germs of consumption. Much may be done to lessen the liability to it by attention to the general health, and by developing the lungs and chest, and keeping them strong and healthy. Simple, nourishing food, exercise in the open air, fresh air in the bed room, gymnastics, frequent sponge bathing and chest massage, proper clothing, everything in short which will promote physical and mental well-being, are important to all, and especially to those who have an inherited or acquired weakness.

6. Sanatoria for the isolation and humane care of consumptives who can not be properly and safely treated at home, exist in several states, and are greatly to be desired. Contrary to the popular belief, a large per cent. of those attacked by the disease can and do recover under favorable circumstances. Until the disease can be eradicated, the means of proper treatment should be placed within the reach of all afflicted for their own benefit, as well as for the safety of the public.

7. No person should take a room previously occupied by a consumptive until it has been thoroughly disinfected with formaldehyde, or by burning sulphur, three pounds moistened with alcohol for each 1,000 cubic feet of space, with all the flues and other apertures securely closed. Afterwards the room should be re-papered and all the woodwork re-painted, or washed in strong soap and rinsed in a disinfecting solution. No amount of disinfection of rooms can lessen the importance of cleanliness, fresh air and sunlight at all times.

8. Milk and meat from animals afflicted with tuberculosis should not be used, or, at least, the former should be boiled and the latter well cooked. This is especially important as to milk for children.

9. With proper precaution, consumptives may safely mingle with their families and the public, but for purposes of information and

education in these matters, physicians and heads of families should report all cases suspected to have the disease to the local health authorities and obtain instruction and assistance in preventing its spread.

The time has come for the medical profession to begin a campaign of education upon this subject. It will never have an opportunity to engage in a more important life-saving work. Literature upon the subject for free distribution may always be had upon application to the Board but this should always be reinforced by earnest personal instruction from the family physician.

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SCARLET FEVER.

Scarlet Fever, Scarlatina and Scarlet Rash are different names for one and the same disease. It is an infectious and dangerous disease, and the mildest case may spread the infection and cause the most malignant cases.

Scarlet Fever is essentially a disease of childhood, and always results from infection from a pre-existing case. Countries have been free from it for centuries until it was imported by commerce and trade. Owing to its frequency, and fatality, it is of far more importance to the people of Kentucky than cholera, or yellow fever. In view of these facts, the great importance of prompt isolation and thorough disinfection, to prevent the spread of the disease, are beyond question.

The following rules have been prepared with care and should be disseminated and, as occasion requires, observed by all interested in the welfare of children:

1. When a child has sore throat, and fever, and especially when Scarlet Fever is in the neighborhood, it should be immediately separated from others until a competent physician has seen it and fully determined that it is not affected with a contagious disease.

2. If Scarlet Fever, maintain strict isolation, in an up stairs room, if possible, however mild the case may be, until the shedding of the skin is complete and all branny scales disappear, and, afterwards, until the patient has been thoroughly bathed and clad in garments which have not been in the sick room during the illness. As a rule, in Kentucky, children are released from quarantine and permitted to return to school or mingle with other children long before it is safe for them to do so. In giving the disinfecting bath the hairy scalp should receive special attention.

3. Placard the house, and keep all children, all having the care of children, and all going where children are, away from it. It should be borne in mind that the poison of Scarlet Fever surpasses that of any other eruptive disease, in its tenacious attachment

to clothing and other objects, and in its portability to other houses, or even to distant localities.

4. Burn all discharges from the mouth and nose, and disinfect all other discharges from the patient. Burn all refuse from the sick room. All spoons, cups, glasses, etc., used in the sick room should be washed separate from other dishes and should remain some time in boiling water.

5. Disinfect all bed and body clothing, and everything else used in the sick room, before removing it therefrom, by immersion for six hours in a solution of chloride of lime, four ounces to the gallon of water. They may then be wrung out and put into the wash. Remember, however, that no disinfectant in the occupied sick room can do away with the necessity for abundant fresh air and sunlight.

6. After complete recovery, or death, carefully and thoroughly disinfect the room and its contents. To do this, stop all apertures well, dampen the floor and bedding, and use nascent formaldehyde, or burn three pounds of sulphur, dampened with alcohol, for each 1,000 cubic feet of space, leaving the room closed for at least twelve hours. Afterwards the room should be thoroughly ventilated, and all ledges, woodwork and walls washed with strong soap, and rinsed with the disinfecting solution. This work should be done thoroughly, otherwise it will give only a false sense of security.

7. In case of death the body should be wrapped in a sheet saturated in disinfecting solution and buried as soon as practicable, without public funeral service. Newspapers in giving notice of death, should state that it was from Scarlet Fever, and that children, and persons having the care of children, should not attend.

8. Physicians attending Scarlet Fever should use a robe, overalls or other protection for his clothing and person; should wash his hands and face before leaving the house, and take every other needful precaution to prevent him from carrying the disease to others.

9. The law requires that all cases of contagious disease shall be reported to the city or county board of health, by the head of the family or physician, within twenty-four hours. This law should be observed in every case.

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TYPHOID FEVER.

This Board feels it to be a duty to call the earnest attention of the medical profession to the increasing prevalence and mortality from typhoid fever and to the consequent growing importance of the constant use of the methods endorsed and confirmed by scientific research and observation for the prevention of

the disease. 13,305 cases of this disease and 1,579 deaths were reported in Kentucky in 1903, chiefly confined to people in the prime of life and usefulness. The cost of caring for those sick of it, to say nothing of the sorrow, suffering and loss of life, for the year, is reported as being \$963,750. Add to this the valuation of \$1,000 placed upon each healthy immigrant by publicists gives a further loss to the State of \$1,579,000, making a total loss in one year from this disease of \$2,542,750.

Typhoid fever is probably the most preventable of all diseases, not even excepting small-pox. It is now definitely known that, like cholera and dysentery, the germs of the disease are contained only in the discharges from the bowels and kidneys of those sick of it, and that it is necessary for a person to swallow some of such discharges, or things polluted by them, in some way, in order to contract the disease. The germs usually gain entrance to the system through polluted water from wells or streams draining inhabited areas, and polluted by infected fecal matter or urine, or such matter may be carried by flies and deposited on the food, utensils and hands, in unscreened kitchens and dining rooms. The germs may also be carried on the hands of careless attendants, or on soiled clothing, or indirectly, by using milk or other articles of uncooked food or drink from cans and vessels washed in infected water. Ice from infected water is also dangerous, as it has been proven that freezing does not kill the germs. A large volume of water may be infected from one case, and, if already polluted with organic matter, become a ready culture fluid for the manipulation of the germs. In the now noted epidemic at Plymouth, Pennsylvania, involving the sickness of 1,104 persons, and the death of 114, the outbreak was traced to the use of water from a stream infected by the discharges from one imported case. The recent disastrous epidemic at Ithica, New York, causing many deaths, and requiring the suspension of Cornell University, was traced to the use of a public water supply similarly infected, and that at Butler, Penn., is equally important.

On the other hand, in the distressing and fatal epidemics at our military camps at Chickamauga, Camp Mead, Montauk Point, and other places, during the Spanish-American war, flies were found to be the principal carriers of the disease by the United States Commission appointed to investigate the origin of the outbreak. By the use of white powder sprinkled over the discharges in the latrines, thousands of these pests were tracked direct from these, and found covering the food, hands and utensils in the kitchens and mess rooms of the common soldiers. Cultures

taken from the feet, legs, bills and intestines of these flies showed the germs of typhoid fever in countless numbers. The kitchens and mess rooms of the officers were screened, and they almost uniformly escaped the disease. Other facts no less convincing as to both water and flies being carriers of this disease might be multiplied indefinitely, if space permitted. In a smaller way, they must be common in the experience of most physicians in active practice.

Based upon the teachings of the foregoing facts, the following rules have been prepared with care for the guidance of all persons interested in their own and the public health:

1. When it is known or suspected that a person has typhoid fever, he should be placed in a large, well ventilated room, with the windows and doors well screened, and such preparation should be made from the first day for the thorough and systematic disinfection of all discharges from the bowels and kidneys as will protect other members of the family, the attendants, and the community.

2. A solution of chloride of lime, eight ounces to the gallon of water, should be provided in quantity, and a quart of this should be put in the bed-pan or vessel each time before it receives the discharges, and should be well stirred and allowed to stand in the vessel at least an hour before it is buried. An equivalent solution of creolin, or a thick white-wash made from the fresh quicklime, may be used in the same way when the chloride of lime can not be obtained, but with these at least two hours will be required to complete the disinfection.

3. Soiled bed or body linen should remain in the chloride of lime solution for an hour, and may then be safely put in the family wash. Soiled paper or cloths used about the patient should be immediately burned. Attendants should wash the hands frequently, and always rinse the lips, and the mouth before eating. No one should partake of any food which has stood in the sick room. All of these precautions should be continued until the recovery is complete and until all diarrhoea has ceased, and the urine should be disinfected even longer as the germs are often found here after they disappear from the bowels.

4. Typhoid fever is not contagious in the sense commonly understood, and if the precautions above indicated are faithfully and intelligently carried out, a case may be treated in any family or community with perfect safety. If others have the disease it will be because they were infected from the same source as the patient, or contracted it elsewhere. The same precautions should be observed in dysentery and all other diarrheal

diseases, including summer complaint in children.

5. All well water, and unfiltered water from rivers draining inhabited areas, where typhoid fever and diarrheal diseases are likely to occur at any time, and milk stored in cans or vessels washed in such water, should be looked upon as suspicious, and should always be boiled before it is drunk by any one not immune from typhoid fever. In the absence of a reliable, filtered, public water supply, carefully collected and properly stored, cistern water is safest.

6. The windows and doors of all dwelling houses, and especially of the kitchen and dining room, should always be well screened, and the flies actually kept out. Unless this is done a carelessly managed case of typhoid fever, or other diarrheal disease, even a mile or more away, may be a source of danger on account of flies. As mosquitoes are now known to be the carriers of malaria, the same precautions will protect from this poison also.

The universal and effectual practice of these precautions would require intelligent care and some expense, but would result in the practical disappearance of one of our most common and fatal domestic pestilences, which is not only a disgrace to our civilization, but an annual scourge and tax upon the people of Kentucky in comparison with which yellow fever and cholera, plague and other exotic diseases so feared by our people sink into insignificance.

A large share of this preventive work must fall to the lot of the medical profession and we appeal to it for cooperation. Literature bearing upon the prevention of this and other communicable diseases will be furnished for free distribution at any time.

* * * * *

DIPHTHERIA.

The unusual prevalence of diphtheria in many sections of the State makes it the duty of this Board to again call attention to the best known methods of preventing the occurrence and spread of this disease.

1. Diphtheria is both contagious and infectious, and is distinctly a preventable disease, being easily limited to the first case or cases. When it gets away from the primary cases and makes its escape upon the community somebody is to blame. The sooner we accept this as a sanitary maxim the sooner we shall begin to do our duties as individuals and communities.

2. On account of its frequency and fatality this disease is of far more importance to the people of Kentucky than yellow fever or cholera.

3. When a child has sore throat, especially if diphtheria is in the neighborhood, it

should be immediately separated from other children until a competent physician has seen it and decided whether or not it is affected with a contagious disease.

4. If diphtheria, strictly isolate the case at once, in an up stairs room if possible, and as disconnected as practicable from the living and sleeping apartments of other children. No one except the physician and nurses should enter the room, and they should take every precaution not to carry the infection to others.

5. The Board urges the use of antitoxin, not less than 3,000 units, in every case as soon as the disease is recognized; and recommends that immunizing injections of 500 units be used for all children who have been seriously exposed.

6. Placard the house, and keep all other children, all having the care of children, and all who go where children are, away from it. Notify the health officer of the town or county within twenty-four hours as the law requires, and he will co-operate with the physician and family to keep the disease from spreading.

7. The discharge from the mouth and nose, which especially contain the germs of the disease, should be received on soft cloths and burned, and other discharges should be disinfected, and all refuse from the sick room burned. All utensils used in feeding the sick should be washed separately from other dishes, and should remain some time in boiling water.

8. Disinfect all bed and body clothing, and other like things, as soon as removed, by immersion for at least six hours in a solution of chloride of lime, four ounces to the gallon of water. They may then wrung out and put in the wash. Remember, however, that no disinfectant in the occupied sick room can do away with the necessity for abundant fresh air and sunlight.

9. The isolation of the patient should continue for ten days after all trace of the disease has disappeared, and until he has had a disinfecting bath and been clad in garments which have not been in the sick room. No person from a house where there is diphtheria should be permitted to go into public assemblies, and no child from a house where this disease has prevailed should be allowed to attend school without a certificate from the health officer that it is safe to do so.

10. After complete recovery, or death, always thoroughly disinfect the room and its contents, preferably with nascent formaldehyde, or where this is not available, by burning three pounds of sulphur, moistened with alcohol, for each 1,000 cubic feet of space, previously stopping all openings, and damp-

ening the floor, bedding and clothing, and leave the room tightly closed for twelve hours. The room should then be thoroughly ventilated, and all ledges, woodwork, etc., washed with strong soap and rinsed with a disinfecting solution.

11. In case of death, the body should be wrapped in a sheet saturated in a disinfecting solution and buried without public service. In giving notice of death newspapers should state that it was from diphtheria, and that children, and those having the care of children, should not attend the funeral.

12. To be effective the precautions herein suggested should be rigidly observed. Imperfect isolation and disinfection are worse than useless, giving rise only to a false and misleading sense of security.

13. County and municipal boards of health have full authority under our laws to enforce these rules, and will fall short of their duty if they fail to do so.

SMALLPOX AT ST. JOHN'S ERUPTIVE HOSPITAL, LOUISVILLE, FROM SEPTEMBER, 1902 TO FEBRUARY 1905.

The following statement has been furnished the *Kentucky Medical Journal* by Dr. J. I. Whittenberg, Superintendent of St. John's Eruptive Hospital:

Patients admitted from September 1, 1902, to September 1, 1903, white, 334; colored, 767; total, 1101; mortality, 11—one per cent.

Patients admitted from September 1, 1903, to September 1, 1904, white, 141; colored, 55; total, 196; mortality, 16—eight per cent.

Patients admitted from September 1, 1904, to February 7, 1905, white, 25; colored, 12; total, 37; mortality, one—two and seven-tenths per cent.

It will be observed that in the year 1902-1903 out of a total of 1101 cases, 767 were negroes, while in 1903-1904 out of a total of 196, 141 were whites. This striking reversal of the figures is accounted for by the fact that compulsory vaccination was begun in 1903, and was practiced mostly amongst the negroes. As a consequence the number of cases in this class immediately declined, so that for the two succeeding years many more whites have been affected than negroes.

It will further be observed that the mortality for the first year reported was very low, only a fraction over 1 per cent. For several years preceding this time the mortality had also been very low. In 1903-1904 it jumped to the very considerable figure of 8 per cent. This serves to illustrate the contention that

the continuation of the mildness of an epidemic cannot be guaranteed; at any time the graver forms of the disease may make their appearance, continuing and arising from an epidemic which in its beginning was of the mildest character.

An inspection of the Eruptive Hospital, made by the writer in January, 1905, in conjunction with the Secretary of the Kentucky State Board of Health, showed the buildings to be in most excellent condition as to cleanliness and order, and the arrangement for the care of patients all that could be expected of a hospital of this character. In addition to large and airy separate wards for male and female, white and colored, a number of separate rooms are provided for patients whose condition demands separate accommodation. These rooms are nicely furnished and are very comfortable. The only possible suggestion of improvement in this particular would be the erection of several isolated cottages of two rooms each, for the accommodation of patients or families who might desire complete segregation, and were willing at the same time to pay for the extra accommodation and service entailed.

There are, of course, no fancy frills about the Eruptive Hospital; there are no lace curtains at the windows, no soft coverlets of radiant hues—in fact many of the “comforts of the home” are lacking, as they should be. Everything in the nature of blankets and bed-linen is of a kind which can be sterilized by boiling; the mattresses are of excelsior with cotton tops, sufficiently comfortable yet inexpensive enough to be destroyed by burning after once having been used.

The inspection of the plant commenced with a mid-day meal from the efficient hands of Mrs. Brown. The food served was of good quality and was well prepared.

Under authority of the Board of Safety the Superintendent has recently had built a beautiful new ambulance for this special service. It can be closed up and made absolutely tight, and so subjected to the action of the disinfecting agents recognized as most useful in this connection (formaldehyde and sulphur).

Dr. Whittenberg is to be commended for a painstaking and intelligent administration of the Eruptive Hospital.

EDITOR.

THE DIFFERENTIAL DIAGNOSIS OF DIPHTHERIA.

By D. M. GRIFFITH, M. D., Owensboro, Ky.

The question of diphtheria and the difficulties of diagnosis, is a most interesting subject at all times, but especially so at this season, for the coming of spring brings that period of the year when the prevailing conditions favor the development and growth of micro-organisms.

That the disease designated diphtheria is primarily of local origin, with a later constitutional disturbance, due to the absorption of a poison the result of the operations of a specific micro-organism, is not to be doubted for an instant, even by the most skeptical. It is sustained by the consensus of opinion of the ablest writers of the day; it is proven by the experiments of the most scientific bacteriologists, who re-produce at will this disease in lower animals by inoculation; and it is accepted by the thoughtful practitioner who, in the exercise of his impartial judgment, avails himself of the advanced methods to establish the presence of this bacillus in the cases that come under his care.

That diphtheria is an infectious disease, and that the Klebs-Loeffler bacillus is the specific cause of this infection, is accepted alike by the clinician and the bacteriologist. However, there are few who reason that the occasional presence of this bacillus in the throats of persons apparently healthy destroys the theory of this germ being the sole causative factor. They seem to forget that numerous other poisons lie indefinitely dormant in surroundings unfavorable for their development. The besieger must secure entrance before he can destroy the fortress as a whole; so must the invading germ of diphtheria gain entrance to the tissues, through an abraded epithelium, before it can by its artillery of poison destroy the citadel of the body. There is this point of difference, however: the assaulting forces of man once in, will operate under all conditions and cause disaster; while the invading germ, though it gain entrance, must also find a soil suitable for its development and propagation.

The healthy and vigorous individual, by virtue of his strength and activity of functions, affords a certain resistance which not infrequently amounts to immunity, to this as well as other infections; conversely the ailing and debilitated subject, with the usually diseased mucous membrane of the upper respiratory tract, furnishes a most fertile field for a nidus of infection. Therefore, it behooves parents to see that children (who by the way, are particularly susceptible to diphtheria) are free from vicious sanitary surroundings,

habits, conditions and indulgences that tend to lower the general vitality; also enlarged tonsils, adenoids, etc., as they but serve to invite infection.

The old theory that any of the various conditions called "bad hygienic surroundings" can originate diphtheria, is not now tenable. McCullum claims that they are not even important factors in increasing the frequency of the disease. From that conclusion, however, I beg to dissent. Unsanitary surroundings certainly possess the power to excite irritation and in that way, if no other, produce inflammation with its accompanying warmth and moisture, conditions which favor germ development and propagation and thereby they indirectly aid in exciting the disease.

Is the bacteriological diagnosis of diphtheria trustworthy? This I should answer in the affirmative. Under the law of cause and effect when we encounter a certain condition, or result, and find a given condition, or force, preceding that found, the established law fixes the connection of cause and result. When we find a certain germ preceding or accompanying a certain disease with such frequency as to no longer permit its being called a coincidence, and that germ by inoculation will re-produce the disease, can we not therefore just as logically conclude that the germ is the cause and the disease is the result? If my premises are correct, are the hundreds of cases clinically diagnosed, in which the germ is also found by test, to go for naught? Given a suspicious case in which even the alert and eminent physicians in control have not been able to clinically remove the shadow of doubt or to definitely announce the existence of diphtheria, what is more gratifying to those in charge than to swab the suspected area and with culture tube and microscope, eliminate or detect the regular outline and the dark and deeply stained points in their protoplasm (Loefflers methylene blue stain) which characterize this bacillus. This certainly is practical, for in almost every county seat mind and microscope are the essential elements that make and maintain a successful practice. Then we can support or shatter our conclusions by having the bacteriologist inject cultures into animals, and if the immunized ones survive and the non-immunized ones succumb, the nature of our case is proven beyond dispute.

In almost every specimen of collected secretions we will find bacteria other than the diphtheria bacillus; for instance diplococci, staphylococci, streptococci, etc., which, when the soil is also favorable for their development and growth, create what is known as mixed in-

fection. But these other bacteria without the diphtheria will not re-produce the disease by inoculation.

Those antagonistic to the bacteriologic test argue that the occasional failure to find the specific organisms, in cases which have been clinically assumed to be diphtheria, nullifies the trustworthiness of the test. This is probably due to lack of care in securing the culture, swabbing areas not infected, as the mouth and pharynx, when in fact the area and membrane are not visible, being low down in the respiratory tract. Then too, the culture is secured after the use of chemicals, or serum-therapy, which alters and possibly prevents the development of the culture.

To deny the virtue of a drug, a theory, an operation or a test, because at some time in the hands of some one man it was "weighed in the balance and found wanting" would be to argue in favor of the exception rather than the rule, and to rob our profession of many of its valuable means. In deciding about the deadly disease of diphtheria, to abandon the probable for the improbable is but to invite disaster, not alone for our patient, but the nearby neighbor as well.

In the art of diagnosis we must apply whatever means the difficulties encountered warrant. Some cases are so sudden in onset and so plain in their visible manifestations, that "he who runs may read," and for these I consider the clinical interpretation all sufficient. Other cases are so subtle and delusive in their approach and appearance that the most renowned and resourceful physician will require all the aid science affords before he can arrive at a definite conclusion, and for such he must take an appeal to the court of last resort, which in the case of diphtheria is the culture test and animal inoculation. Whatever be the individual opinion of the medical attendant, as to the identity of diphtheria bacillus and the virtue of the culture test, as an aid to diagnosis, he can not as a physician true to himself and his calling fail to give his patient, and those about him, the benefit of whatever merit it may possess.

As to differential diagnosis, I at once eliminate that bug-bear membranous croup, believing as I do in the unity of the two diseases. The difference, I take it, is one of degree and location and not of kind, "a distinction without a difference." In further differentiation certain facts and features are not to be too lightly considered. If an epidemic exists, if our patient has been exposed to contagion, if the patient be young and onset sudden (in older children and adults it is gradual), if the complaint be of the throat and a membrane visible, or if our patient has a low temperature with great prostration—any of these

warrant, at once, a suspicion of diphtheria. The temperature is a very important diagnostic feature. Diphtheria, uncomplicated, is a disease of low temperature. The fever, however, is no indication of the constitutional disturbance to be expected; nor is the amount of membrane always in proportion to the poison created. A mere dot of membrane with the smallest degree of fever may, by the virulency of the infection, eventuate into the most violent systemic intoxication. In measles and scarlet fever there is a streptococcus infection which produces a membrane firmly adherent; but the characteristic eruptions enable us to exclude them.

Perhaps the most puzzling disease in this connection is tonsillitis. Its identity can generally be established by the high temperature, chill, sudden onset, the inflamed and enlarged tonsil, the inflamed soft palate and the exudate, if any, being limited to the tonsil and being easily detached, leaving a smooth, non-bleeding surface, as against the low temperature, generally slow onset, normal size of tonsils and absence of chill, location at any point on mucous membrane of mouth, pharynx or larynx, of a dense leathery and adherent membrane, leaving a bleeding surface and rapidly re-forming, and considerable prostration, which characterize diphtheria. Any clinical conclusion which leaves a point of possible doubt should be verified by culture test and inoculation.

The honor and renown accorded Klebs and Loeffler for establishing the identity of the bacillus that produces the poison of diphtheria, stimulated further research in another of the co-ordinate branches of experimental medicine. It inspired Behring and others with a desire to find something, in the therapeutical field, that would stay the rapid progress of this poison; and the process of experimental evolution gave to the world that beneficent agent, anti-toxine, which has been the greatest boon given to the mothers of men since the dauntless McDowell, in utter defiance of conservatism and in the isolated fields of Kentucky, boldly and fearlessly marched into the unknown Africa of anatomy—the abdomen—and successfully performed the first ovariectomy.

But anti-toxine is another story to be told in another paper.

THE MORTALITY OF DIPHTHERIA BEFORE AND SINCE THE INTRO- DUCTION OF THE SERUM THERAPY.

By ADOLPH O. PFINGST, M. D., Louisville, Ky.

Up to ten years ago diphtheria was dreaded by the physicians as well as the laity. The last ten years, however, have been marked by pronounced therapeutic advances in the treatment of this disease which have resulted in a great reduction in the number of deaths. Although several factors may have entered into the causation of this reduction, the one pre-eminent is the modern method of treating these cases with antitoxine. At any rate it is only since the advent of the antitoxine and its more general employment that the mortality has been noticeably reduced. To judge accurately and intelligently of the real value of the serum therapy in diphtheria, a comparison would have to be made of the cases treated with and those treated without it. As the records of only a few of the health boards in this country separate the cases treated with antitoxine from those treated by other means, we can only draw our own conclusions from the general mortality records since the introduction of the new form of treatment. These figures are convincing, the low death rate from diphtheria in the last ten years standing out prominently in comparison with the former figures. In 1902, in a paper presented to the Kentucky State Society, I published such statistics as I was able to procure by applying to the health boards of the larger cities of this country. In every report the mortality from diphtheria in the pre-antitoxine period ranged from 28.5 to 42 per cent. A rather sudden and marked decrease was noted in the year following the introduction of the serum therapy, and since then the deaths from diphtheria have steadily decreased. St. Louis, with a death rate of 35.46 per cent for six years previous to the antitoxine period, showed a mortality of only 16.76 for the six following years. In New York City there was a mortality record of 28.02 for five years before, and 14.32 for five years after the advent of antitoxine. Chicago records show a rate of 41.96 for five pre-antitoxine years, and only 6.79 for the five subsequent years. These reports covered a large number of cases, but correspond pretty closely with the reports of the cities reporting a smaller number of cases.

In Washington, where note was made of the form of treatment instituted in each case, those in which antitoxin was injected showed a mortality of 3.8 per cent., in marked contrast

to 34.2 per cent, of deaths in the cases treated by other means.

In Newark, N. J., where similar record was kept, 10.02 per cent. of the patients treated with the serum, and 20.35 per cent. of those treated otherwise, died. F. Seigert*, a few years ago in a summary of over 130,000 cases, gathered from the reports of all of the leading hospitals of Germany, found an average mortality of 41.5 per cent, in the four years previous to the employment of antitoxin, and an average of 16.4 in the four following years. As the mild cases are not frequently sent to the hospitals, Seigert's figures include mostly severe cases.

To supplement these figures with more recent statistics I have lately applied again to the health boards of this country. In all of the cities from which I received a report, the death rate in the last six or eight years has ranged from 10 to 16.5 per cent., a somewhat higher average than was noted in the first years of the use of antitoxin. Among the the lowest is the rate of mortality of Louisville in the year of 1903, 6.8 per cent; and Minneapolis had 7.46 in 1902, and 5.10 in 1903. The high mortality record of the pre-antitoxin period has not been reached in any of the cities from which I have obtained statistics. The highest death rate has been reported from Milwaukee, where 483 cases of diphtheria were recorded in 1901 with 100 deaths, or 20.7 per cent.

Notwithstanding these convincing figures there are still many practitioners who are skeptical as to the virtues of the serum treatment of diphtheria, believing that the low death rate had its cause in mistaken diagnosis. The writer firmly believes that many cases have gone on record as diphtheria which in reality were cases of follicular tonsillitis of the confluent variety, in some instances on account of a mistaken diagnosis, and probably more frequently where the attending physician, to be on the safe side, employed the antitoxin and reported the case to the health authorities as one of diphtheria. In this way the percentage of deaths from diphtheria has undoubtedly been underestimated, hardly sufficiently, however, to account for the marked decrease in the mortality of this disease.

Probably the best evidence of the lessened severity of diphtheria in latter years is the infrequency with which intubation is being performed. Formerly 90 per cent. of laryngeal cases had to be tubed, whereas now intubation becomes necessary in only about 30 per cent of these cases. Personal information from several of the men who are doing and have done a large number of intubations, convinces me that the indication for the operation

is even less than that. In response to recent inquiry of a number of the men in the United States who have done much intubation, I obtained no actual figures but only word that intubation is done by them much less frequently than in former years, some stating that the operation is now so infrequent that they have ceased to keep accurate account of their cases. It is a fact that the death rate in laryngeal cases of diphtheria, reduced from 90 to 65 per cent. by the use of the laryngeal tube, has been lowered still more since intubation has been supplemented by the serum therapy until at the present time but 10 to 15 per cent of the reported cases of diphtheria terminate fatally. In other words the present percentage of deaths, 10 to 15 per cent. just about represents the former percentage of recoveries.

In most of the larger cities of this country the health boards are now supplied with funds with which to furnish antitoxin free to the needy poor. As the majority of the severe cases of diphtheria occur among the poor this should further reduce the death rate of this disease. It has hardly been in vogue long enough to draw conclusions at this time as to its effect upon the mortality records.

SCARLET FEVER—HAS ITS CAUSATIVE AGENT BEEN ISOLATED AND IDENTIFIED?—DIFFERENTIAL DIAGNOSIS.

By JOHN G. CECIL, M. D., Louisville, Ky.

Much creditable work has been and is still being done looking to the isolation and identification of the causative micro-organism of scarlet fever. Among the active investigators in this field may be mentioned Doehle, Mallary, Marmorek, Babes, Berge, Rasky, Mosny, and Klein. The limit of this paper forbids extended review of the investigation of these several bacteriologists. A brief notice, however, of the work of Klein, as being most worthy of recognition, will not be amiss.

Klein isolated a micrococcus from the blood of persons suffering from scarlet fever during an epidemic confined to the consumers of milk supplied from a dairy-farm at Hendon. The suspected milk was drawn exclusively from certain cows on this farm, which were the subjects of a peculiar disease. This cow disease was characterized by "an ulcerated eruption on the teats and udder, attended with destructive lesions in some of the viscera." From these ulcers and from diseased portions of the viscera Klein satisfactorily isolated the streptococcus which he found in human scarlet fever, and which he holds to be

the specific cause of the disease. Klein's streptococcus of scarlet fever is by many bacteriologists considered identical with the streptococcus pyogenes of erysipelas and puerperal septicaemia. Klein, however, while admitting that it is impossible to make the distinction between these streptococci, either morphologically or in appearance under cultivation, claims that by careful study of the scarlatinal streptococcus as to its biological characters, it can be distinguished, and asserts in proof of his contention that the results of the inoculation of this scarlatinal streptococcus into lower animals cannot be induced with the streptococcus of erysipelas or puerperal septicaemia.

He proved that definite lesions found in some cases of scarlet fever can be caused in cattle and rodents by inoculation of an organism found in the blood and tissues of scarlatinal patients, and further, that this organism can be recovered by cultivation and that it will cause the development of a similar disease if injected into other animals. But, as Dr. Caiger says, "Klein has not succeeded, in the first place, in showing, and here is the weak link in a chain of evidence in other respects excellent, that the strictly scarlatinal symptoms in human scarlatina are dependent upon the presence of this particular micro-organism; and secondly, that an organism obtained from an animal suffering from a disease undoubtedly set up by the injection of material derived from human scarlet fever, is capable of originating true scarlet fever if introduced into the human body. The latter point is incapable of demonstration, as the experiment cannot be made, but the first is deserving of very careful consideration."

It is not improbable that the ulcerated fauces and the development of abscesses in various parts of the body during and subsequent to an attack of scarlet fever, are due to the streptococcus pyogenes, but this does not account for the distinguishing characteristic symptoms of the disease. And so, while it is generally conceded that scarlet fever is of bacterial origin, we must conclude that Klein and all other bacteriologists have thus far failed to isolate and identify the specific and causative agent.

Differential Diagnosis: The differential diagnosis in the vast majority of cases presents no unusual difficulties. In isolated cases, in the anomalous, septic, toxic, or aberrant types of the disease, the difficulties of diagnosis may be insurmountable.

The first point to be ascertained in all cases is the possibility of contagion. It is certain that every case of scarlet fever is contracted from some other case, although many times the source of contagion cannot be uncovered.

The next step is a thorough familiarity with the characteristic symptoms, period of incubation, mode of invasion, duration, progress and essential features of the common ordinary eruptive and contagious diseases. One attack of scarlet fever usually confers immunity from subsequent attacks which persists during life. Second attacks are, however, occasionally met with in persons in whom the genuineness of the first attack is beyond question. While no age is exempt, it is seldom seen in the aged or in nursing babes; the large majority of cases are seen in children of both sexes alike, under twelve years of age. The incubation period is nearly always less than six days, though there are exceptions occasionally to this rule. In a large proportion of cases the period intervening between definite exposure and the appearance of febrile symptoms will be from two to four days.

The invasion is generally abrupt and the sequence of symptoms rapid, the order of appearance being weariness, chilly sensations or a decided chill, aching and muscular soreness, coated tongue and loss of appetite. In addition to the above there is a tripod of symptoms following, which is distinctively suggestive of scarlet fever, namely, sore throat, headache, and acid vomiting. Vomiting will occur in about eighty per cent. of all cases. Temperature rises rapidly with the appearance of the first symptoms. In cases of moderate severity the fever will range on the first day from 102 to 105 degrees. There will be daily variations of one or two degrees, the highest fever in the evenings; this continues throughout the attack, the temperature subsiding with the disappearance of other symptoms. When fever persists after desquamation is well established it is due to complications or sequences of the disease.

Scarlatinal sore throat is characterized by a vivid red injection of the fauces, palate, uvula and tonsils, sometimes attended with oedema. In severe types of the disease ulceration of the inflamed parts may occur, presenting an appearance which is with difficulty distinguished from the false membrane of diphtheria.

The tongue in scarlet fever is almost diagnostic of the disease. A thick, white coat covers the surface, through which protrude the papillary elevations. This coating is soon denuded, beginning at the tip and edges, leaving the surface in appearance like a ripe, red, succulent strawberry.

The eruption of scarlatina is characteristic, appearing with great uniformity on the second day of the invasion. First observed on the chest, neck and upper arms, it spreads thence rapidly over trunk and limbs, reaching

its height in three or four days. "Its color is best described as a bright red, varying in mild attacks towards pink and showing a tendency to the darker scarlet tints in severe cases." The two elements in this rash are the general diffuse confluent erythema, and the fine papular or punctate elevations showing through the scarlet-hued redness. In fully developed cases there is more or less inflammatory oedema. The rash as seen on the face, palms and soles does not present the true characteristic appearance exhibited on the trunk and limbs. The pulse of scarlet fever is unduly rapid; this feature is especially marked in toxic cases. The cervical glands are enlarged and tender in practically all well marked cases. Deglutition is generally painful. The nervous system is affected in proportion to the severity of the attack. The invasion may be ushered in with a convulsion. Delirium is especially common at night when the fever range is high. The urine during the first few days of fever exhibits the common characteristics incident to acute infectious febrile disorders, being scanty, high-colored, decidedly acid and containing an excess of solids in proportion to its bulk, and frequently containing albumen.

Scarlet fever varies in intensity from cases that are so mild as to easily escape detection, to others so severe as to prove fatal within a few hours of the initial stage of invasion, before the eruption or any of the diagnostic symptoms develop.

As may be readily inferred the difficulties in diagnosis increase as we approach the extremes. In the so-called mild, aberrant cases, ability to make the diagnosis frequently depends upon the opportunity of observing them at exactly the right moment. Not infrequently the diagnosis is not positively made until weeks after recovery from the slight indisposition, when the appearance of desquamation, or a post-scarlatinal nephritis, confirms the suspicion. Surgical scarlet fever is often of this very mild type.

Again, other cases are aberrant because of the absence of one or more of the characteristic symptoms. The eruption, the strawberry tongue, or the red throat may be entirely absent.

It must not be forgotten that two or more infectious diseases may coexist. Thus scarlet fever and diphtheria, scarlet fever and measles, scarlet fever and chickenpox, or any three of them may occasionally be observed coexisting. This naturally leads to confusion and the closest study will be necessary to establish the diagnosis.

The toxic form of the disease, known as scarlatina maligna, ataxic or adynamic scarlet fever, characterized by the immediate devel-

opment of a very profound impression upon the patient, sometimes striking him down before any of the characteristic symptoms of scarlet fever manifest themselves, presents unusual and at times insurmountable difficulties in diagnosis. The pulse is rapid and weak, the rash if present is ill-defined, the patient may be conscious or unconscious, often dies with signs of profound nervous depression and a subnormal temperature throughout the attack.

Scarlatina anginosa, the septic form of scarlet fever, is characterized by ulceration, beginning usually in the tonsils, often extending to and causing wide-spread destruction in adjacent parts, accompanied by symptoms of septicaemia. The eruption is of a darker hue than the benign form, at times becoming petechial. Should the eruption be delayed the disease is liable to be mistaken for diphtheria. The temperature rises to 104 degrees or higher, and the pulse is very rapid. Deglutition is difficult or impossible, owing to the ulceration of the tonsils, palate and fauces and the brawny infiltration of the tissues of the neck.

The diseases which are likely to be confounded with scarlet fever are measles, German measles, early period of smallpox, tonsillitis, especially when accompanied by indigestion rashes, erythema, erysipelas, diphtheria, eczema and some of the drug eruptions, as belladonna or copaiba. In the early stages, before the eruption of scarlet fever appears, it is often impossible to make a distinction between that disease and tonsillitis or diphtheria. The development of the rash and the other ordinary symptoms of scarlet fever will in twenty-four or forty-eight hours clear the diagnosis. In all cases of doubt in differentiating between scarlet fever and diphtheria, the microscope will prove invaluable in determining the presence or absence of the Klebs-Loeffler bacillus. In measles, roetheln and smallpox the history of the invasion when obtainable, a close study of the symptoms with especial attention to the characteristic features of the different eruptions, usually suffices to make the differentiation.

The absence of the more striking constitutional symptoms in erythema, eczema, desquamative dermatitis and the drug eruptions will generally be sufficient to establish a diagnosis. The absence of throat symptoms and the strawberry tongue in erysipelas, the punctated appearance of the scarlatinal rash, contrasted with the diffuse uniform redness of erysipelas with its strict line of demarkation and the slow progress of the inflammatory boundary, serve to make the distinction between these two diseases not difficult.

Let us entertain the hope that soon the findings of bacteriology will make the differentiation between all infectious diseases an easy problem.

TYPHOID FEVER PROPHYLAXIS.

Through proper diagnosis of the disease: through disinfection of each case: through purification of the water supply.

The country district a menace to the city, and should be brought under proper sanitary regulation.

By LOUISE SOUTHGATE, M. D., Covington, Ky.

While the germs of typhoid fever are chiefly carried through drinking water, as has been conclusively proven in several epidemics, there are still other ways by which the bacilli may be carried into the system: by flies, as was shown in the Spanish war; by roaches, which have access to infected material; by contiguity to other typhoid cases, as has been exemplified in hospitals; through the milk supply, by washing cans with infected water by the dairyman outside of the city limits. Laundresses have contracted the disease from infected clothes.

Dr. Shropshire, of Texas, in a town where without exception the water supply came from an artesian well 1,400 feet deep, had fifteen cases occurring during a very dry summer within a radius of three hundred yards of a typhoid case where the dejecta were thrown without disinfection onto the dusty earth and spread by the winds in every direction.

Several years before, a similar epidemic was traced in the same town to a case of typhoid where the stools likewise were not disinfected, but were thrown on the ground in December; for five months damp weather prevailed and there were no cases of typhoid. In May a drouth occurred with strong southeast winds; within two weeks typhoid fever appeared, and of seventy-three cases in the doctor's practice, seven-tenths were to the northwest of the infected focus.

In the prevention of epidemics of typhoid fever the first and most essential thing is the correct diagnosis of the disease; second, the thorough disinfection of the dejecta; third, the purification of the water supply.

That many cases of typhoid go unrecognized until upon the post mortem table, is known to every pathologist. The experience of the Spanish war surgeons proved to us the tendency to call typhoid fever malaria; and that this mistake is still made is proved to us by the census of 1900, which told us that three

persons died of malaria to seven dying of fever. The Delaware State Board of Health after a thorough examination of blood, etc., declared that nearly all remittent and continuous fevers were due to typhoid germs. Osler has affirmed the same thing of the continued fevers of the middle and northern states.

Malaria in the United States is only a malignant disease in certain well defined areas in the South. Outside of this it is not a cause of death, yet it is given as the cause on many death certificates, where, with careful blood examination, typhoid would have been found to be the disease. Many ambulant cases of typhoid run an entire course without being seen by a physician. Most physicians have seen for the first time cases of typhoid which were then beginning on the third week.

The medical profession is only just awakening to the fact that typhoid is a common disease of childhood, and that it has been reported in a number of cases as affecting nursing babies under one year of age. All such undiagnosed cases as the above are a grave menace to the health of the community, because no precautions have been taken to isolate the cases nor to disinfect the urine and stools. That these mistakes in diagnosis are made, any physician of experience can testify.

Health Boards should impress on doctors the necessity of suspecting all cases as typhoid accompanied by malaise, foul tongue, loss of appetite, diarrhoeal disturbances, evening fever, etc. The layman also should be shown the importance of medical advice under such circumstances.

If the physician had within easy reach and free of cost the making of laboratory examination for the malarial parasite and typhoid bacilli, such mistakes would be fewer. But these tests are not possible for the ordinary practitioner and the ordinary patient will not pay for them. Therefore they should be furnished free of cost by city and State. Most of the larger cities do furnish some of these tests free, but the country districts have no such facilities offered them, and it is in the country that they are most needed, for it is from the water sheds along the small rivers and creeks that the typhoid germs start on their death-dealing mission. Fulton tells us that the mortality from typhoid in the rural districts is greater than in the cities, that the rural mortality is 62 per 1,000 of population to 38 per 1,000 of population for urban typhoid. Such being the case, it behooves the cities to see to it that the country districts are under as strict sanitary rules as they provide for themselves.

County health officers should be medical

men, educated in the newer laboratory methods, not men educated in pre-antiseptic methods. Stringent laws should be made making it obligatory to report to them every case of continued fever; accompanying the report specimens of the blood should be sent for examination. If the specimen is negative another examination should be made of both blood and feces. Every case should be carried out with the same precaution as for typhoid fever until the diagnosis is established.

The second step in prophylaxis is the disinfection of urine and feces. This is often carried out in an ineffectual manner. The doctor sometimes suggests it in a half-hearted way so that the family is not impressed with its importance. Should they be earnest in trying to carry out the physician's orders, their ignorance of bacteriology and the very elements of sterilization render their efforts futile. The physician himself often has not an accurate idea of what he wants done, of the kind of antiseptic to use, of the amount necessary for a given length of time. To meet this lack of knowledge the following tables are copied from Cole, of Johns Hopkins Hospital:

The nurse should be taught to regard every specimen of urine as a pure culture of typhoid bacilli, and to exercise the greatest caution not to spill a drop of urine or particle of feces over patient, bedding or floor. Gwynn has found by laboratory experiments that for the disinfection of urine within one-half to one hour, a volume of urine would require

3-10—4-10	its volume of 1-20	Carbolic Acid Solution
1-40	" "	" 1-1000 Bichloride "
1-10	" "	" 10 per cent. Formalin "
1-10	" "	" Liquid Chlorides.

As to the relative value of disinfectants, milk of lime hardly deserves the name of disinfectant. Formalin is costly, but is efficient. Bichloride of mercury and liquid chlorides are of real value in the urine, rapid in action and efficient in comparatively dilute solution. Carbolic acid must be used in large amounts and strong solutions.

The best plan is to have a covered jar containing, say one and one-half liters of 1-20 carbolic acid sol. or 200 c. c. of 1-1000 bichloride sol. Into this jar pour the urine, cover and let stand; the jar can be emptied every day but not for one or two hours after the last urine has been poured in. These amounts are sufficient to sterilize three liters of urine. A second jar, large enough to contain the urinal or bed pan, should be filled with the disinfectant, and the pan should remain in this constantly when not in use by the patient. The urine should be disinfected in all cases into the third week of convalescence;

other cases with vesical symptoms for a longer time.

Disinfection of the Stools: Bichloride of mercury is not suitable for the stools. The commercial product of chloride of lime often is not good. Carbolic acid he found very satisfactory, a given volume of feces being disinfected in one-half hour by mixing it with an equal volume of 1-20 carbolic acid solution, if the two are thoroughly mixed together. While this has proven effective in laboratory experiments he would recommend that twice the volume of carbolic acid solution be used and the mixture stand in a covered jar from two to three hours. The ideal method of sterilization is boiling, as was used in the South African War.

After a stool the patient's buttocks should be washed in bichloride 1-1000, and he should be urged to carry out disinfection some time after recovery.

Disinfection of Linen: All linen leaving the patient's bed should be steeped for two hours in 1-20 carbolic acid solution, and then it should be immediately boiled. All dishes should be boiled before leaving the room. Rubber gloves and apron should be used by the nurse while attending to the stools and urine of the patient. These rubber articles can be washed in carbolic solution. Fly screens should protect windows and doors; the patient must be kept away from family, only infrequent visits being permitted.

Health Boards, by frequent circulars can impress upon physicians the necessity of the greatest care in carrying out these sanitary measures. Physicians, through articles in the lay press, can inform the public on such matters. It were better to lay aside the professional etiquette which condemns the reputable physician to keep out of the daily papers, when he knows that the ordinary citizen is getting his ideas of medicine from quacks who distort the truth, and reporters who are ignorant of it. The carrying out of stringent hygienic measures of this kind would not cost the county as much as the building of enormous drainage canals, etc., now cost. The purity of the city's water depends on keeping her water sheds free from contamination.

Koch has proved these theories to be correct at Trier where, with a corps of assistants, he has stamped out an epidemic in three months. Other neighboring towns similarly infected with typhoid, where such strenuous measures were not used, were very much longer getting rid of the disease.

When typhoid has been correctly diagnosed and each case thoroughly disinfected, the subject of water purification becomes a much simpler matter. Recently the method of cop-

pér sulphate purification has been recommended by the United States Agricultural Department; this has, as yet, had but a limited trial. Slow sand filtration in many cities has lowered greatly the percentage of typhoid fever. This method is meeting with strong advocacy in Paris as a means of purifying the very polluted water of the Seine.

Summing up, to prevent typhoid:

(1) Accurate diagnosis: to obtain this, municipal and district laboratories for examination of suspected cases. Compulsory report of suspected cases: to insure this, a fee should be given the doctor for every case reported, and a fine imposed for every one not reported, as in England.

(2) Sanitary inspectors, who could be called upon to go to a house and enforce disinfection upon complaint of neighbors or any one who might suffer from such neglect, and who should always go and disinfect rooms after death or recovery of patient.

(3) Purification of water supply by cities, and the drinking only of boiled water by the individual during epidemics.

To secure needed laws on this subject more physicians should come forward as candidates for legislature and for city offices.

TUBERCULOSIS.—WHAT IS BEING DONE TO PREVENT ITS TRANSMISSION?

By J. A. FLEXNER, M. D., LOUISVILLE, KY.

If "knowledge is power," then the discovery of the bacillus of tuberculosis by Koch in 1882 placed in the hands of humanity a means of greater possible good than any discovery of the last great century. The isolation and the studies of the life history of this bacillus have swept away in the short space of twenty years the accumulated ignorance and superstitions of the preceding centuries; and as we now know accurately the character of the enemy we have to deal with, we are in position to thwart his advance and to deal with his forces with confidence in our resources which can never exist when only empirical knowledge is the basis of our defence or attack. Not the least good, by any means, of this discovery is the establishment of the fact that the tuberculosis problem is not solely a medical problem but a sociological problem of the greatest import—that it is not merely a question with which doctors and medical societies must concern themselves, but it is a question which can only be solved by the co-operation of the national, state, and city governments, by philanthropic and special societies with the advanced medical knowledge and social knowl-

edge which has now accumulated in consequence of the close study which this question has received. Upon the doctor and the medical research student has fallen the brunt of pointing the way to successfully deal with this "great white plague," as Oliver Wendell Holmes so aptly calls tuberculosis; but upon the law-making branches of the government and the executive departments rests the greatest responsibility for making this knowledge effective. The means by which the disease may be prevented and cured are known; the means to prevent, to cure, or to alleviate, in view of the genral interests involved, must come from general sources. That no general interst in this or any other similar subject can arise until the general public is correctly informed about it, will not be disputed. In order to awaken this interest a correct knowledge of this whole matter is essential. As in so many other ways, education upon this special subject is recognized by phthiologists the world over as the first great requisite the public requires in order to successfully meet this problem. This education should begin in the schoolroom for children—they should be taught correct habits of life there, and in some of our eastern cities this is done as suggested by Knopf some time ago; for adults the press and the lecture platform constitute the best available means for disseminating knowledge upon this subject.

The recent organization of the National Association for the Study and Prevention of Tuberculosis is a most important step in this direction. Its purpose is to enlist enthusiastic aid from professional and lay sources in an active crusade, in a campaign of education against this greatest of all plagues. It is no visionary hope that, when the whole people learn how to avoid tuberculosis, and the medical profession how to diagnose and treat it in its incipency, that then what vaccination has done with smallpox will occur in the case of tuberculosis.

The progress of the sanitarium movement in the country has been steady, but their numbers thus far are wholly inadequate to deal with the numbers who require residence in such places for their own sakes as well as the best interests of the public at large. In its largest sense the sanitarium is, when properly conducted, not only a home where consumption may be cured, but a school where the entire subject of prophylaxis should be thoroughly taught. Each cured patient who leaves it is, in the best way, an apostle of this newer gospel of the truth concerning this dread disease. And these apostles number now many thousands the world over. From the small beginning which Dr. Trudeau made in the Adirondacks less than thirty years ago,

the list published by the Charity Organization Society of New York contains over sixty names of sanatoria and hospitals for consumptives in the United States and Canada, and this is stated to be only a partial list. This organization has published a work on the Prevention of Tuberculosis which ought to be in every physician's hands. For the public it has published and distributed thousands of leaflets printed in English, German, Italian, Yiddish, Chinese and Russian, succinctly describing the disease and giving many useful directions to the consumptive and his family.

The dispensary movement, which has been inaugurated much later than the sanitarium, promises to reach a large number of cases which, by the very exigencies of their conditions, are excluded from sanatoria, but whose lives may be prolonged and who thus do not become the subject of public charity on the one hand, or public menace on the other. In addition to furnishing food and medicine when needed, they are also schools for the dissemination of the essential facts regarding the disease. The recognition of the transmissibility of tuberculosis from cattle and other animals to man, and the steps which in some places have been instituted to eliminate this source of infection, constitute another important step in the prevention of tuberculosis. The full truth about the subject of bovine tuberculosis is about emerging from a confusion into which Koch threw the matter by his unfortunate London speech. The various commissions which have studied this phase of the problem, the work of Pearson and Ravenel of the Penn. Live Stock Commission, leave no room for doubt as to the transmissibility of bovine tuberculosis to man and especially to children. The fact that tubercle bacilli can penetrate the intestinal mucosa without producing a local lesion, especially when fed in cream, milk, or other fat-containing foods, is established; and that the lungs, or some part of the lymphatic apparatus, may become the seat of an active tuberculosis from these sources shows the importance of maintaining our food supply free from possible contamination on the one hand, and at all times from healthful sources. In some States, notably in Pennsylvania and New Jersey, this exclusion of infected cattle from the general herd has been done for many years and has been an element not only in the improvement and value of the cattle themselves, but one undoubted element in the diminished incidence of human tuberculosis where this legislation is honestly carried out.

From the more purely medical side of this question no step exceeds in importance the attention which writers and teachers are giving

to the diagnosis of tuberculosis in its incipency. Probably more confusion exists in the minds of many men as to what constitutes an early diagnosis of tuberculosis than in the most of the differential diagnoses we are called on to make. It is just here that the dispensary movement is of such great promise and importance. The ubiquity of the disease precludes the possibility of many specialists in the case of pulmonary tuberculosis. Every general practitioner should not only know the points which go to make the symptom-complex of incipient tuberculosis, but ought also to acquire the requisite skill to recognize the condition when he meets it. It is a mistake to wait on the microscope to show the bacilli in the sputa. Months may be lost, and the most valuable months in the patient's life, too, if this plan is followed out.

To be able to give the patient the benefit of his best chance for recovery, proper treatment should be instituted long before the bacilli swarm in the sputa. This best chance is to-day known to be a very good chance indeed. The mortality records of such sanatoria as Trudeau's in the Adirondacks, Bochman's and Dettweiler's in Germany, covering a series of years, show that at least eighty-five per cent. of the cases of incipient tuberculosis get well. Herein lies the reason for the change of opinion and feeling on the part of properly informed men with regard to pulmonary tuberculosis to-day as compared to what was felt in these cases twenty or thirty years ago. This phase of the subject has been well expressed by Dr. J. H. Pryor. He says: "We must care for the consumptive in the right place, in the right way, and at the right time, until he is cured; instead of as now, in the wrong place, in the wrong way, at the wrong time, until he is dead." We know how true the latter clause of this quotation is; and the spirit of the times is working out the salvation of the race along the lines of the proper recognition of the disease in its early stages, as well as the proper caring for the consumptive in the right place and the right way when he is the victim of actual disease.

The proof that tuberculosis is a house disease is as clear as demonstration can make it. This fact is true of cattle as it is of man. The cattle of the plains, wild cattle, are free from bovine tuberculosis; and the recognition of the influence of the tenement house in the maintenance of a steady supply of victims—food for the disease—has led to the development of the model tenement house idea, which promises to be one of the most effective steps against the disease in its very stronghold. The Tenement House Commission of New York has accomplished great good since

its creation, though in the face of strong opposition from persons and corporations, some religiously holding these miserable rookeries for investment purposes. As opposed to the darkness, dampness, filthiness and immorality of the old tenement, the new plan is the construction of buildings where due regard is given to the necessity for fresh air, light and general sanitary surroundings. And experience has shown that health and morality improve side by side. What the old tenement has done in the spread of tuberculosis is well illustrated in the case of the Russian and Polish Jews. These people came into these infected houses free from the taint of tuberculosis. Long residence among all the unsanitary conditions prevailing in these places has dissipated their former immunity and has shown that the tubercle bacillus respects neither religion nor race.

Among the recent philanthropies looking to the betterment of the tenement house condition is the gift of Mr. Henry D. Phipps of \$1,000,000.00 to a corporation which is to use this sum in building proper tenements for the poor of New York—a most practical as well as beneficent step in the warfare against tuberculosis, and which it is to be hoped will be repeated many times by our multimillionaires. That the results of these combined influences are encouraging, the accurate statistics of Massachusetts and New York indicate. In Massachusetts the death rate from tuberculosis has declined between fifteen and twenty per cent, since 1886. In New York the death rate from consumption in 1890 was twenty-four and a half per 10,000 population; in 1900 it had fallen to nineteen and one-tenth, a decrease of twenty-two and four tenths per cent. Dr. H. M. Biggs estimates the decrease in the death rate from tubercular diseases in the last twenty years in New York at nearly forty per cent. "In 1881 the deaths from tubercular diseases in the Boroughs of Manhattan and the Bronx numbered 6,123; in 1901, twenty years later, they numbered 6,051. During this time the population of the boroughs had increased nearly seventy per cent. viz: from a little over 1,200,000 to more than 2,100,000." These figures are not only a tribute to the efficiency of New York's Health Department but they show what effort, intelligently directed, can accomplish against this insidious but deadly disease, they prove that tuberculosis is a preventable disease. That it is a curable disease, and that without a specific for its cure; with the resources now within our knowledge it can be, in time, banished from the homes of men. That the search for a specific treatment, as well as a vaccine for its prevention, is being carried on by Maragliano and Marmorek and others is

too well known to be noticed further in this connection, and while holding ourselves ready to welcome any advance science may make in the treatment of the tubercular diseases, we should not underestimate nor forget the influences which have thus far been effective in preventing their transmission, or in curing them when they have once taken root.

Since writing the above a very promising movement looking to the establishment of a hospital for tuberculosis in Louisville has been inaugurated. Dr. Dunning S. Wilson, who has been working along this line for some time, first asked my cooperation with him and we easily enlisted Miss Tarrant, the Head Resident of Neighborhood House, in the cause. The nucleus of an association for the purpose outlined was formed at a meeting held at Neighborhood House recently. Mr. Robert W. Bingham was elected its temporary chairman and Miss Tarrant secretary; and representatives of many philanthropic bodies, as well as various church societies, were present. It is hoped to secure a sufficient sum to start the hospital shortly and the organization trusts to take an active part in an educational movement concerning tuberculosis as well.

BOVINE AND HUMAN TUBERCULOSIS—LATEST VIEWS IN REGARD TO IDENTITY AND TRANSMISSIBILITY.

Editor Kentucky Medical Journal:

Replying to your recent inquiry regarding the question of the identity of the bovine and human tubercle bacilli and the possibility of human infection from bovine sources, I would state the following as about representing the present status of the question: After Koch's London address, wherein he denied the transference of bovine tuberculosis to man, a number of governments appointed commissions to look into the subject. The English Royal Commission has made a partial report based on the study of two thousand cadavers, and they state that the pathological effects of the two strains of bacilli are identical. They state that the lesions produced by bovine and human bacilli are indistinguishable from each other, and evidently regard Koch's dictum as erroneous. A more recent report from a German Commission states unequivocally that the bovine disease is transferable to man, but that the bovine bacilli maintain their characteristic morphology. A report by Theobald Smith, of Harvard, who first pointed out the morphological differences between the strains of bacilli, published in the

American Journal of Medical Sciences, details three autopsies on children whose death was due to tuberculosis of bovine origin.

The fact appears established that bovine tuberculosis is transferable to the human being and that it is fatal for man, though in less degree than the disease produced by human tubercle bacilli. That these acid-fast bacilli are but mutations from a parent stock seems exceedingly probable, and the timothy-hay bacillus has been suggested as the parent organism.

The manner in which tubercle bacilli become virulent for fowls—the avian tuberculosis—and the further discovery of tuberculosis by Friedman in the turtle, a cold-blooded animal, show the ability of the tubercle bacilli to acquire a wide range of parasitism. The similarity in the reactions of the tuberculins from these various sources, and their power to immunize experimental animals against human tubercle bacilli, are also strongly indicative of a common origin. Bovine tuberculosis is in all likelihood merely a tuberculosis modified by the peculiarities of the animal, and all precautions against its spread are next in importance to the care of human secretions themselves.

J. A. FLEXNER.

BOVINE TUBERCULOSIS AND ITS RELATION TO PUBLIC HEALTH.

By DR. F. T. EISENMAN, PRESIDENT KENTUCKY VETERINARY MEDICAL ASSOCIATION, LOUISVILLE, KY.

Tuberculosis is an infectious disease, affecting alike the human species, horses, cattle, hogs, reptiles, fishes and birds. Sheep and goats under normal conditions show remarkable immunity for tuberculosis, but when inoculated with pure culture and kept indoors they readily succumb to the disease.

That man is most susceptible to tuberculosis is clearly shown by facts disclosed by post-mortem examinations revealing that one-third of the human race has at one time or another suffered from it, and also that one-seventh of the whole population die from it.

Among lower animals, cattle are the most susceptible to tuberculosis. The dangerous character of this disease was recognized by the Jews during their Egyptian captivity, which led to the enactment of ecclesiastical laws forbidding the consumption of flesh from cattle so affected.

In Munich, as far back as 1370, tuberculosis in cattle was recognized as a menace to public health, and as a result laws were framed forbidding the consumption of flesh from tuberculous animals.

Florinus in 1702 described bovine tuberculosis and reported that it was identical with

syphilis, which resulted in the destruction of animals affected with the disease.

The Berlin Board of Health in 1783 rejected the theory of the identity of tuberculosis and syphilis, and declared the flesh of animals affected by it fit for food, and as a consequence all laws in Prussia, forbidding the use of flesh from tuberculous animals, were repealed.

In 1816 Tscheulin formulated the following rules for the proper disposition of carcasses infected with tuberculosis:

1. Tubercles were to be removed.
2. Diseased parts to be destroyed and the meat sold at a low price.
3. Carcasses extensively invaded should be rejected.

As early as 1865 Villemin showed that tuberculosis was due to specific infection which produced the disease in rabbits by inoculating them with tuberculous lesions taken from human subjects. He also produced the disease by the experimental feeding of animals and by causing them to inhale tuberculous material.

The disease was produced in cows about the same time by Chauveau, and the truth of his investigations were confirmed by Klebs, Cohnheim and Gerlach.

The results of these experiments of producing tuberculosis in one species from the infected material of another led to the conclusion that tuberculosis in all mammals is identical, and this confirmed the opinion that tuberculosis was a greater menace to the human species than that occasioned by the loss from the total destruction of infected cattle.

The extensive invasion of tuberculosis among the cattle of Europe and this country is truly alarming.

Statistics gathered by the National Bureau of Animal Industry show that the disease is on the increase, and that the virulence of the bacilli from the human source has been increased by passage through cats, rabbits and calves until in each case when inoculated it became very active with bovine animals. Inoculation of bovine animals with bacilli from human sources, shows that a considerable proportion of such bacilli produced generalized tuberculosis in these animals, thus exhibiting a virulence which is not to be distinguished from that of tubercle bacilli from bovine sources.

As a result of these investigations we are taking a much broader view of the question and the slight differences that were raised, so that the distinguishing of the human and bovine tuberculosis as produced by two distinct organisms is fading away.

After all there is only one tuberculosis, one tubercle bacillus, with many variations, ac-

cording to its method of culture, whether it is grown in an artificial medium or in the animal organism; but aside from these variations the bacillus is always the same, and if given suitable conditions will revert to its original form.

We should try to draw a practical lesson from these scientific investigations.

There has already been a great deal of good done by having all rooms occupied by consumptives thoroughly disinfected, sputum destroyed, spitting in public buildings and on sidewalks prohibited. Suitable sanitarium have been provided where nothing but consumptives are treated, and in which every precaution is taken to protect the public from the infection.

Twenty-five years ago Villemin demonstrated that tuberculosis was infectious from one person to another. Veterinarians called attention to the danger of infection from the lower animals, but this was not regarded, as the old theory that tuberculosis was a hereditary disease was that still held to by the majority of the medical profession. Until the discovery of the bacillus tuberculosis, no attempt was made to control the disease; what seemed to be an impossible condition has resolved itself into a plain question of proper sanitary conditions.

There appears to be still at the present time a prejudice against the theory of infection from animal sources, as there was formerly against the infection from man to man.

In 1901, at the British Congress of Tuberculosis, in the memorial address claiming that there was a vast difference between human tuberculosis and bovine tuberculosis, Koch stated that it is improbable that the disease could be transmitted from the lower animals to man. He based his assumption on the fact that he failed in every attempt to transmit human tuberculosis to the lower animals, and from this he drew his conclusion that it would be equally as impossible to infect man with animal tuberculosis.

But since that time his experiments have been proven false. Human tuberculosis has been transferred from man to other animals, and the bacilli of the bovine type have been found in the lesions of human beings.

Now that we have the plain facts, are we simply to ignore them and find fresh reasons for condoning such a menace to the public health? Are we to allow milk to be sold that is obtained from cows where fifty to ninety per cent. of the herd has tuberculosis? Must we use meat from diseased hogs and cattle? Is this to go on without the least restriction? There seems to be no immediate answer to these questions unless it is that the majority of the medical profession does not sufficiently

recognize and warn the people of the grave and immediate dangers which surround them from such gross oversight on the part of our law makers.

We have numerous instances of authentic cases of infection from the lower animals to man and the transmission of human tuberculosis to the lower animals.

It is a sad fact that most of the bacilli of the bovine type are found in young children. The bovine bacilli are pathologically more active, they are more virulent to most animals and the conclusion is drawn that they are more virulent to man than the bacilli of the so-called human sort.

It is a fact that human bacilli are not so virulent as those obtained from other mammalian sources, and that the human organism has the power to overcome and gradually to render these bacilli less harmful; but this influence for good is constantly being counteracted by the fresh infection with the lower animal tuberculosis. Far be it from us to discourage any of the efforts to stop this infection from man to man, but we should be more strict and careful in regard to the infection from tuberculous lower animals.

Herewith is submitted some information concerning the prevalence of tuberculosis.

Slaughterhouse statistics of Prussia show 14.6 per cent. of cattle and 2.14 per cent. of swine to be tuberculous.

Slaughterhouse statistics of Saxony show 29.13 per cent. cattle and 3.10 per cent. swine.

Slaughterhouse statistics of Leipsig City show 36.4 per cent. cattle and 2.17 per cent. swine.—(Siedamgrotzky.)

In Belgium 20,850 animals were tested with tuberculin; 48.88 per cent. reacted.—(Strubbe.)

Denmark, 1893 to 1895—49.3 per cent reacted. Denmark, 1896 to 1898—32.8 per cent. reacted.—(Bang.)

In Great Britain 20,930 cattle either slaughtered and examined, post-mortemed or tuberculin tested showed 5,441, or 26 per cent. infected with tuberculosis.

MacFadyean estimates that 30 per cent. of the cows in Great Britain are tuberculous.

Extent of bovine tuberculosis in the United States disclosed by the tuberculin test can be gathered from the statistics compiled by Russell and Hastings of the Wisconsin Agricultural Experiment Station:

Illinois, 1897-98	929		12.0
Illinois, 1899	3,655	560	15.32
Michigan			13.0
Minnesota	3,430		11.1
Iowa	873	122	13.8
Wisconsin:			
Experiment Station Tests—			
Suspected herds	323	115	35.6
Non suspected herds	935	84	9.0
State Veterinarian's Tests—			
Suspected herds	588	191	32.5
Tests of local veterinarians, cattle intended for shipment to States requiring tuberculin certificates	3,421	76	2.2

The prevalence of bovine tuberculosis is more marked in civilized communities where there are more numerous sources of infection.

Cattle in cities deprived of proper sanitary measures are always menaced by the disease, for when the infection is once introduced there is great danger of the entire herd sooner or later falling victims to the disease.

Experiments have been made showing that within six months healthy cattle have contracted the disease from two or three infected cows, placed in different portions of the barn, boxed off in stalls six feet high, without ever coming in contact with the diseased animals.

Before the experiments were made the healthy cattle were tested with tuberculin and showed negative reaction.

The first public test of a large herd in this State for tuberculosis was made by the writer at the Central Kentucky Lunatic Asylum at the instigation of Dr. M. K. Allen, Louisville Health Officer, for the purpose of demonstrating the amount of infection existing in a seemingly healthy collection of milch cows.

The first test was made in April with results showing a reaction of 46 3-4 per cent. The percentage of diseased animals was so great that the officials of the asylum were alarmed and refused to believe that the test was correct. This necessitated a second test, which was conducted during the following October. Percentage reacting from this test was 40 per cent. This encountered more opposition from the officials, and they refused to have the condemned animals slaughtered.

The matter was then referred to the State Board of Health who ordered a third test which was to be final. This test was made in December, and as a result 30 1-3 per cent. reacted.

Including the cows which were chronically infected and failed to react to the second and third tests, and those which contracted the disease from April to December, the result of the three tests showed that 63 per cent of the entire herd were infected with tuberculosis.

Milk taken from eleven of the condemned cows was examined bacteriologically by Dr. Vernon Robbins, Louisville Bacteriologist, who reported the presence of the bacilli of tuberculosis in three samples.

Upon the strength of this report the State

STATE	Number tested	Number tubercular	Per cent tubercular.
Vermont	60,000	2,390	3.9
Massachusetts	24,000	12,443	50.0
Massachusetts, entire herds	4,093	1,089	26.4
Connecticut	6,800		14.2
New York, 1894	947	66	6.9
New York, 1897-98	1,200	168	18.4
Pennsylvania	34,000	4,800	14.1
New Jersey	2,500		21.4

Board of Health called a meeting and ordered all cows that reacted to be immediately slaughtered.

At the post-mortem without an exception every one of the thirty-nine cows killed presented the various lesions characteristic of bovine tuberculosis.

Of the numerous tests that have been made by the writer this particular case has been selected, because of its public character, to demonstrate the prevalence of tuberculosis in herds apparently sound.

Examination of milk for tuberculosis has shown a variation in infectiousness of 5.5 per cent to 66.6 per cent.

Four years ago the Illinois State Board of Live Stock Commissioners had milk from thirty cows examined, and the milk of eight of them, or 26 per cent., was found to harbor the bacillus of tuberculosis.

The bacillus is nearly always found in cows suffering from mammary tuberculosis, and has been often demonstrated in milk without udder inflammation.

Authenticated statistical reports plainly indicate that a large share of human tuberculosis, especially in children, originates from the ingestion of the bacilli with contaminated food.

Many instances are recorded proving that human beings have been accidentally infected from bovine sources through the handling of tuberculous material and milk; when such does occur the disease is more virulent from this source of infection than from tuberculosis caused from human infection.

Tuberculin as a diagnostic feature for the detection of tuberculosis in milch cows cannot be over-rated. In the trained hands of the competent veterinarian its efficiency to detect tuberculosis in cattle is practically infallible.

With the knowledge that a great per cent. of the cows supplying milk to the city of Louisville are infected with tuberculosis, we should no longer for a moment tolerate the sale of milk unless it can be shown to be the product of cows which have reacted negatively to tuberculin.

Louisville's City Ordinance requires quarterly inspection of dairy cows supplying milk for city consumption by competent veterinarians who must certify to the health of the animals, character of food provided, sanitary handling of milk, etc.

Since this ordinance has gone into effect about two hundred thousand cows have been examined, and of this vast number, less than twenty (20) cases of tuberculosis have been reported. This indicates that the milch cows are distressingly healthy or that the qualified (?) veterinary inspectors are either ignorant

of the character of the disease or lax in their method of inspection.

Dr. M. A. Purdy, of Shelbyville, who reported the cows above referred to as having tuberculosis, is the only man on record in the Louisville Health Office who has found the disease among the cows inspected, supplying milk to the city, and from this condition of affairs it appears that one inspector at least is familiar with the duties of the inspection, and pursues his work conscientiously.

There can be no improvement in the character of the milk supply of Louisville until the State Board of Health has full authority to appoint competent veterinarians whose efficiency and integrity can be vouched for, and the formation of laws demanding that all milch cows from which the city's supply of milk is drawn shall be subjected to the tuberculin test.

It is the especial duty of every physician to explain and impress upon his patients and associates the grave dangers which lurk in milk that has been taken from cows which have not been subjected to the tuberculin test, so that the people will understand and see for themselves the great danger from tuberculous milk, and demand a certified milk from their dealers.

The writer herewith presents the following resolutions which were drafted at the last meeting of the Kentucky Veterinary Medical Association, held at Lexington, Ky., December 27th, 1904 and hopes that all the medical profession, both the physicians and veterinarians, will heartily endorse and recommend the adoption of the suggestions and the plan of action recommended by the following resolutions:

"In view of the fact that the Royal Tuberculosis Commission has issued the statement, that in its final report it will give as its opinion that bovine tuberculosis is transmissible to the human race by the consumption of tuberculous milk, therefore, be it

"Resolved, That, it is the sense of the Kentucky Veterinary Medical Association that it is dangerous and a menace to human life to use milk from cows which have not been tested with tuberculin and shown negative reaction.

"Whereas, the Kentucky Veterinary Medical Association, now convened, has determined, after taking the testimony of competent and qualified veterinarians, that at least 20 per cent of the cows now supplying milk to the various cities in the State of Kentucky are tubercular, therefore, be it

Resolved, That we hereby suggest that the Boards of Health in all towns and cities throughout the State, on and after January 1,

1905, take stringent measures to stamp out the dread disease and require of all dairymen the testing semi-annually of all dairy cows with tuberculin by a competent and regularly qualified veterinarian."

THE AMERICAN ANTI--TUBERCULOSIS LEAGUE.

The next meeting of the American Anti-Tuberculosis League will be held in Atlanta, Georgia, April 17 to 19, 1905, under the presidency of Dr. George Brown, of Atlanta. Governor J. M. Terrill has tendered the Hall of the House of Representatives of the Georgia State Capitol for the use of the League during the meeting and he will deliver an address to the League on the first morning, as will other distinguished men. The opening session is intended to be a broad one in an educational sense and the heads of the largest educational institutions of the United States will be invited to be present. Reduced rates will be had on all railroads, and hotels will also make special concessions for visitors on this occasion. Every member of the profession in the United States who is interested in the prevention of tuberculosis and who has the good of humanity at heart, is requested to be present and to help with this great work which has been started so auspiciously and for which there is such a great field for the service of suffering humanity.—EDITOR.

PROPHYLAXIS OF VENEREAL DISEASES.

By J. T. WINDELL, M. D., LOUISVILLE, KY.

That the official regulations of prostitutes has had little if any effect in preventing the spread of venereal diseases is now generally accepted as a fact. Such examinations even in the best governed cities are, from the very nature of them, in danger of being influenced by graft and favoritism.

The public prostitute soon becomes an expert at deception and will prepare herself for the examination by removing evidences of existing venereal diseases.

All Parisian prostitutes are expert syringers and will douche the vagina faithfully immediately before the regular Monday inspection; they soon learn the virtue of the glycerine suppository for removing the congestion of the cervix uteri, and many other methods of deceiving the official examiner. They soon become familiar with the possibility of transferring the certificate of registration and examination, of counterfeiting the date of the card of description of the one to whom it had been issued as an official approval of her right to continue business.

Adversity the teacher of most prostitutes, prompts them to ply their calling without fear or thought of the future; they care not if the diseases they transmit result in suffering, exposure, humiliation, disgrace or death; what they strive for alone is money.

So thus we have to deal with people who have no altruism in their make-up, who live for to-day alone and care not for the future, its rewards or reverses. They are persons who are in the most cases prostitutes not from choice or circumstances, but from their natural instincts; having no morals how can we hope to regulate their vices, which are their stock in trade and only means of livelihood?

The onward march of civilization is fast destroying that mecca of all young prostitutes, that mansion of sin and of old time splendor, the gilded palace with imposing front, with wide portals that were closed in day time by storm doors which hid the many colored glass entrance that opened into the broad hall where the subdued rays from the many-armed and shining chandelier only accustomed the eyes to withstand the brilliancy of the large double parlors in white, gold and mirrors. This establishment was presided over usually by a woman of tact and business acumen, who understood the necessity of health as one of the pre-requisites of continued success in her calling; caring for her inmates at all times and insisting upon medical examination and attention at the first symptom of illness of any kind and particularly of a venereal nature.

Here and then such diseases were the exception instead of the rule, owing to more congenial surroundings, better food and clothing and better class of men who frequented such resorts.

Time is fast changing this institution, and the first class house is becoming a thing of the past; the madame of wealth and influence is no more, and the public houses of the present day are tinsel imitations, the inmates women in the lowest stages of prostitution, addicted to drink and drug habits. The cocaine fiend is more in evidence each day; especially is this true of negro prostitutes.

While the regular disorderly house has degenerated both as to numbers and conditions of the inmates, the house of assignation has reached a position, in point of numbers at least, that far eclipses the public houses of prostitution. In this city alone nearly one hundred of such institutions exist. The great increase in the number of professional street-walkers and clandestine prostitutes is the occasion for this. In these houses accommodations are let to all applicants, no interest is manifested as to the health of the male or

female patrons, and no responsibility ensues as a result of venereal diseases contracted in the house.

Clandestine prostitutes who are the members of large families in poor circumstances and the bearers of venereal diseases can seldom give themselves proper attention, even if they are under the care of a physician, it being often impossible under such conditions to use the prescribed douches if the disease be gonorrhoea, or take the necessary precautions as to food, clothing and toilet if it be syphilis.

For statistics as to the prevalence of venereal diseases in large cities we are dependent on the educated guesses of specialists. Thus, for Berlin Blaschke suggests a syphilis rate of 10 per cent of the males, and Erb one of 12.2 per cent. which would correspond to 400 per thousand for all venereal diseases. The proportion of syphilitics in Paris is placed at 13 to 16 per cent. of the adult male population, but Fournier's estimate corresponds to 25 per cent. of this population. The Committee of the Medical Society of the County of New York believe, on fair data, that 225,000 cases of venereal diseases were treated in Greater New York in 1900, or 64 per thousand. Sturgis had previously estimated the proportion at more than three times this figure. More than half the replies to the question, whether venereal diseases are on the increase in New York were affirmative. It has been recently estimated that more than 10,000 people in this city have venereal diseases, and that at the present time such diseases are not so prevalent as they were a few years ago, especially immediately after the return of the soldiers from the Spanish-American War. Owing to the nature of venereal diseases no laws can be passed to control them, as we do smallpox, scarlet fever, diphtheria and measles, and if passed it would be impossible to enforce them on account of public opinion.

The question of the prevention of gonorrhoea in women is one of great gravity, and should attract more attention than it does, particularly in this country. Much can be done by physicians in lessening the number of cases of gonorrhoea in men by impressing on kept-women and prostitutes, who so numerous come under our care, the necessity of absolute cleanliness and the use of antiseptic injections and douches. When, however, they do come under our care in hospitals, dispensaries, and in private practice, we should endeavor to completely cure them before permitting them to ply their trade.

In considering the necessity for general prophylaxis of syphilis and the direction which efforts towards the accomplishment of this end should take, it should be remembered:

1. That it is a disease of great antiquity,

- and is likely to continue indefinitely.
2. That this disease already affects a large number of the population, and that by means of many forms of inoculation and transmission it is rapidly spreading still farther.
3. That the existing means for its treatment among the poorer classes are insufficient, and that the establishment of institutions for that purpose, or the endowment of special wards in our general hospitals, is a measure eminently worthy of the attention of the public-spirited and benevolent.
4. That its most common mode of propagation is by irregular or illicit sexual intercourse, and that therefore we should turn our main efforts at prevention in this direction, while endeavoring at the same time and in every decent and proper manner to guard the community at large from the effects of ignorance.
5. That prostitution, arising in response to the demand for this illicit indulgence, has, like syphilis, existed from time immemorial, and is not likely to disappear.
6. That prostitutes themselves need protection and have claims on the humanity of the law.
7. That by means of supervisory legislation and control of prostitution the unlawful sexual commerce of the world may most readily be restricted and the spread of syphilis prevented.

When people attain a sufficient knowledge of the nature and consequences of venereal diseases, and young men learn to consult the doctor and not the ever ready friend with the sure cure prescription, or the obliging druggist with his infallible remedies always sold at a greater profit than any other of his commodities; when the law shall require a physical examination of men before it grants them a license to marry and transmit to their wives the venereal diseases they too often have, being either in ignorance of the fact or unaware of the consequences, both to the women of their choice and to their posterity; when doctors learn to cure gonorrhoea and syphilis as they learn to cure many more rebellious ailments, less amenable to our modern therapeutics, by giving their patient with such diseases as much thought as to diagnosis, as much care as to the treatment, and as much advice as to the possible transmission of the malady to others as they would to a patient with diphtheria, typhoid fever, or erysipelas; when men with gonorrhoea learn that the cessation of the discharge of pus from the urethra does not signify that the clap is cured, and that the disease is contagious long after this discharge has disappeared, and that when the chancre on the penis disappears the syphilis is not well.

When prostitutes are well housed, well fed, well clothed and receive proper medical attention when sick, and are denied the privi-

to rarely of plving their trade if the bearer of venereal disease, then we can hope to see a less number of those who have suffered from worshipping at the shrine of Venus.

The following instructions are printed by the Ohio State Board of Health and sent in circular form to practitioners for distribution among their patients suffering from venereal diseases:

"Circular of Information, Adopted by the Conference of State and Provincial Boards of Health of North America.

Issued by the State Board of Health of Ohio.

We hand you this leaflet believing that you would not willingly communicate your disease to some innocent person.

Many fail to comprehend the exceedingly disastrous results that often follow these diseases. Many cases of blindness, complete disability, and not infrequently death result from them. Gonorrhoea is one of the most frequent causes of diseases peculiar to women. So serious a menace have these diseases become to the public health that the medical profession in all countries has become alarmed, and is advocating measures for their prevention.

Syphilis (or pox) is especially a disease from which innocent persons may suffer, as it usually produces sores in the mouth or on the lips, hence may be conveyed by kissing, drinking from the same cup, or using anything which has been put to the lips or into the mouth of one affected by the disease.

These diseases are often communicated when the patient thinks he has recovered. Hence marriage, contracted at this time of the disease, results in much unhappiness, and often in the death of the wife. To protect yourself and others, we earnestly advise the following in the interest of prevention of your disease:

Follow strictly the advice of your doctor and use no other treatment.

Remember that it takes a long time to recover entirely.

Carefully wash your hands with soap and hot water whenever you handle the private parts.

Do not have intercourse and avoid all sexual excitement until your physician says you are completely cured. Be especially careful not to rub your eyes with your fingers.

Do not allow any person to use any cup, glass, spoon, fork or anything that you have put in your mouth.

Do not kiss anyone or wipe the face of a child with a handkerchief you have used. Always use a separate towel. Burn all cloths or cotton soiled by discharges.

Valery Harvard, Assistant Surgeon Gen-

eral. Journal of the Association of Military Surgeons, July, 1904.

Robert W. Taylor, Venereal Diseases.

White and Martin, Genito-urinary and Venereal Diseases.

CONTAGIOUS EYE DISEASES.

By J. MORRISON RAY, M. D., Clinical Professor of Ophthalmology, University of Louisville.

At the present time, when the question of contagious diseases and preventive medicine is holding the attention of scientific and governmental authorities, it seems proper that a knowledge of those diseases of the eye which come under this head should be emphasized and the profession advised of their prevalence, of their mode of propagation and the methods at our command necessary for their prevention.

There are so many conflicting interests at work in the control of state governments and the enactment of laws, that but little can usually be expected from state legislation when it comes to the passing of measures intended either to prevent or control disease.

The writer was forcibly reminded of this by the fate of a bill he requested a prominent member of a recent legislature to introduce, calling attention to the danger from neglect of certain contagious diseases. A similar measure had been passed in other states and abroad, and had proven of value. The member in whose hands the bill was placed, gave it to a kindly member of the medical profession, in the legislature at that time, who was asked to introduce the bill. When he did so he was held up to ridicule and I understand it was used to poke fun at him in his race for re-election and was eventually a factor in his political undoing.

This goes to show how little the average member of the state legislature appreciates measures intended to prevent disease and misery, or to check an epidemic which, if left alone, is sure to later place helpless charges upon the state.

There are many reasons for believing that the larger portion of the laity, and I might say of the medical profession, is either ignorant or careless in regard to the contagious nature of certain diseases affecting the eye. They seem much surprised when informed that a given case will sooner or later infect other members of the family unless the very greatest care is taken and strict precautions instituted. No further evidence of the contagiousness of eye diseases is necessary than is offered by the well-known fact that they flourish in places where people are brought together, especially in unsanitary surroundings, such as orphan asylums, prisons and in armies.

It is almost a daily occurrence to see two or more members of a family suffering from that most obstinate of eye diseases, "granulated lids." Fortunately the location of our State, geographically and climatologically, is such that we are not exposed to the great danger of epidemics of contagious eye diseases as are some other localities. Yet it behooves us to be aware of the possibilities of such an epidemic and the character of such diseases. The city of New York is to-day spending large sums of money in eradicating an epidemic of eye disease that in 1902 came very near closing the public schools of that city.

Broadly speaking all eye diseases accompanied by a secretion from the conjunctiva can be considered as contagious. These can be divided into five classes:

1. Acute Catarrhal Conjunctivitis.
2. Acute Purulent Conjunctivitis.
3. Trachomatous Conjunctivitis.
4. Diphtheritic Conjunctivitis.
5. Tubercular Conjunctivitis.

When brought face to face with an epidemic eye disease it is the duty of the physician to be able to differentiate clearly between these different forms; therefore we will take them up separately and try to emphasize the salient points in diagnosis and treatment:

Acute Catarrhal Conjunctivitis: This is the most common form of conjunctival inflammation. In most instances it is not a serious affection, being self limited in its course, the usual attack getting well in from ten days to three weeks. The first thing noticed is that, on arising in the morning, the lids are found stuck together, with a small quantity of dried secretion adherent to the eyelashes and in the corners of the eyes. This condition increases, the lids become hyperaemic, a mucous discharge becomes apparent. The eye feels uncomfortable as if containing sand or grit, and this discomfort increases on use or exposure to artificial light. The redness of the conjunctiva is noticed both in the ocular and palpebral portions and has given rise to the popular name, "pink eye." While this disease rarely gives rise to serious complications I have seen it leave the conjunctiva dry and shiny, and produce discomfort for many months whenever the eyes are used in close work. It may be due to a number of different forms of bacterial infection, the clinical picture differing but little in many of the varieties. Microscopical study and cultivation of the organism have found a number of different bacteria as the cause for this form of conjunctivitis. These are: I. Koch-Weeks Bacillus Conjunctivitis. This variety is usually found in public schools

during the late winter and early spring. It is self limited and recovers spontaneously.

2. *Pneumococcus Conjunctivitis:* This form, first described by Morax, runs a course similar to that produced by the Weeks bacillus, and is only differentiated by cultivation of its organism.

3. *Diplobacillus Conjunctivitis of Morax and Axenfeld:* This form seems to develop more slowly, the local reaction being less apparent; but it has a strong tendency to chronicity and may persist for months, interfering seriously with use of the eyes.

4. *Staphylococcus Conjunctivitis:* This form is usually mild and is said to occur frequently as a complication of phlyctenulae and eczema of the lids and face.

5. *Streptococcus Conjunctivitis:* This pus organism is frequently found in the severe cases where a muco-purulent secretion is present.

While these forms of contagious conjunctivitis are not all differentiated clinically, their course differs somewhat. The treatment varies but little. This should be directed towards a prevention of spreading, a destruction of the organism and relief of the symptoms. The contagion is generally due to direct contamination by fingers, towels and handkerchiefs. Destruction of the organism is accomplished by antiseptics and cleanliness. Powerful astringents must be avoided. Bichloride of mercury solution, 1,500, boric acid in saturated solutions, or one of the newer forms of silver salts, especially protargol, are most efficacious. The annoying symptoms disappear quickly on subsidence of the inflammation, yet it is well to protect the eyes by colored glasses during the attack.

Purulent Conjunctivitis; so-called Gonorrheal Ophthalmia, or when occurring in the new-born, Ophthalmia Neonatorum: Of all the contagious forms of eye disease this variety when neglected or improperly treated leads to the most distressing results. In our State institution for the blind it is the cause for 26.3 per cent of the blindness, more than any other disease. When it occurs in the adult in a large majority of the cases the presence of the specific organism of gonorrhea can be demonstrated, while in the new-born infant this organism is often absent.

When infection has occurred immediate measures must be taken to prevent the fellow eye becoming involved. This is done by the use of the watch crystal shield applied to the sound eye by a piece of adhesive plaster. The lids swell so that it becomes impossible to inspect the cornea, the conjunctiva becomes chemotic and in twenty-four hours the pus flow is abundant. The pain is usually great, and more or less constitutional symptoms,

such as fever and general malaise, are present. The danger in this disease is that the great swelling of the lids and conjunctiva will cause a stagnation in the blood and lymph channels and a rapid necrosis of the cornea take place. The prognosis in this disease is always grave, and unless early active treatment is begun, loss of the eye is sure to follow. Since it is transmitted only by direct contact it follows that towels, hands, etc., should be carefully watched.

Purulent ophthalmia occurring in the newborn usually develops from one to four days after birth, the longer the delay the milder the infection. The symptoms are very much like those occurring in gonorrheal ophthalmia of the adult, but the swelling and redness are less. In infancy the impossibility of covering the unaffected eye makes an infection of the second eye almost certain.

The prophylaxis of such dangerous diseases is of the highest importance. In adults the patient should always be warned of the possibility of infecting his eye from his hands. In the infant, if the mother suffers from a suspicious discharge, this should receive treatment before the birth of the child. If the child is born before any preliminary precautions have been taken, as soon as it has been carefully bathed a solution of 2 per cent. nitrate of silver should be dropped into each eye. This may cause a slight irritation for a day or two, but accumulated experience has conclusively demonstrated its value, reducing the percentage of such cases in lying-in hospitals from 10 per cent. to less than 1 per cent. It is no longer an experiment.

In a well developed case in an infant or adult active treatment is demanded, and here eternal vigilance and constant attention is the price of sight. A nurse who can properly cleanse the eye should be in constant attendance. The habit prevalent among many of putting breast milk, urine, etc., into such eyes cannot be too severely condemned. Antiseptic washes, bichloride mercury 1-5000, or permanganate potash 1-300, should be used by irrigation. Care must be taken to keep the nozzle of the irrigating tube from producing a corneal traumatism. In the adult, iced cloths should be constantly applied unless the cornea is early involved; in such instance cold applications should be discontinued. The physician in attendance should apply to the eye at least twice a day nitrate of silver in that strength which experience proves will control the pus flow; as strong as 5 per cent. or 10 per cent. can be used if cautiously applied. The new silver preparations, such as protargol, argyrol, etc., can be tried, but I am fully convinced that they do not possess the

power of the time-tried and old reliable silver nitrate.

The moment evidences of corneal involvement appear the treatment should become even more active. If the lids are much swollen division of the outer canthus may, by lessening the pressure on the eye-ball, improve the corneal circulation and prevent its total destruction. Atropia solution, 2 grs. to 1 oz., should be instilled. The general nutrition of the infant should be carefully watched. Experience has proven that when the disease occurs in the premature, marasmic or illy fed infant, the danger to the integrity of sight is materially increased. The worst cases I have seen of this disease were in children born at the seventh or eighth month.

Trachomatous Conjunctivitis: Of all the more common forms of conjunctival diseases, trachoma, familiarly known as "granulated lids", seems the most difficult to properly explain and thoroughly understand. Of its contagious nature there is no question, yet no one has found a specific organism that will surely reproduce the disease. In families where a member suffers from trachoma experience proves that sooner or later others become infected. This is almost a daily observation. Where it occurs as an acute condition the diagnosis cannot be made clinically from an infection by the Koch-Weeks bacillus or the pneumococcus. Indeed both these organisms may be present and yet the disease progress to the formation of the characteristic trachoma granules. A great deal has been written in regard to the identity of trachoma and so-called follicular conjunctivitis, which clinically cannot always be differentiated. Yet no one who will carefully watch the two diseases and see the comparatively mild course of the latter and the many obstinate and distressing complications that follow in the late stages of the former, can fail to be convinced of the difference in their etiology. The dangers from trachoma are not so much from the presence in the conjunctiva of the so-called trachoma granule but the great amount of damage that takes place during the stage of atrophy of the conjunctiva. Pannus, corneal ulcers and intumed eye-lids are complications difficult to deal with and later may cause not only interference with use of the eyes but in many cases loss of sight. There are many interesting features that can be pointed out as occurring in this disease. Many individuals appear immune, the negro particularly so. The fair-skinned and light-haired are the most susceptible. Altitude influences the disease, and over-crowding in institutions is apt to facilitate its development. In Kentucky certain localities seem to furnish a class of cases representing the worst form of

this disease. Indeed, the enormously thickened lids and the highly vascular cornea, often covered more or less with trachoma masses, have been so prevalent in the eastern part of this state as to lead some one to designate this condition "Kentucky Trachoma."

Sattler, of Munich, at one time claimed to have found the organism of this disease, the gonococcus of Sattler. No one was able to verify his findings. Lately Muller of Vienna has isolated an organism similar to the influenza bacillus that he claims will reproduce the disease. Arnold Knapp failed to confirm his experiments. Trachoma, therefore, while no specific organism can be found, is clinically classed as a contagious disease and should be so described. Isolation and great care in cleanliness should be insisted upon.

In the treatment great progress was made when the operation of expression was instituted and it has done more than anything else to lessen the ravages of this disease. In the acute form and during the hypertrophic stage of the chronic cases thorough squeezing out of the granulations and rubbing into the membrane of a powerful germicide, like bichloride of mercury 1-500, will be found to relieve most cases. In the stage of atrophy sulphate of copper in stick will be found of benefit.

Diphtheritic or Membranous Conjunctivitis: This is another rare form of eye infection. The presence of the characteristic diphtheritic membrane deposited on the conjunctiva is usually secondary, but it has been found as a primary disease. A thick membrane, difficult of removal, covering more or less both the ocular and palpebral conjunctiva should always arouse suspicion. But the diagnosis can only be proven by a bacteriological examination and the discovery of the Klebs-Loeffler bacillus. The prognosis is bad, most cases early producing destruction of the cornea. Cases have been reported as saved by the prompt injection of large doses of the diphtheria antitoxic serum.

Tubercular Conjunctivitis: Fortunately this form of eye infection is one of the rarest of eye diseases. In this country the number of cases observed has not been numerous. If primary, it is caused by the entrance of the tubercle bacillus through an abrasion in the conjunctiva. It is generally monocular and the lymphatic glands in front of the ear are enlarged. It sometimes occurs as a complication in those already the subject of tubercular deposits in other parts of the body. Small round nodular masses confined to only a portion of the conjunctiva, most often that of the lids, are found. The treatment consists in early and complete removal. If general infection is not present a cure may be expected.

The subject of contagion in its relation to eye diseases is of value as a question of economics. When such epidemics invade a charitable institution or a public school, much financial loss is brought about by the extra attention required in their eradication. Many children are either temporarily or permanently deprived of the use of their eyes; a number acquire an eye defect which seriously interferes with their earning capacity in later life. In this age of the survival of the fittest they fall far behind their fellows in the race for existence. Experience shows that sooner or later they are forced to seek aid in eleemosynary institutions. At the rate of two hundred dollars a head necessary for their support the public pays out yearly several hundred thousand dollars. At the same time the earning capacity of each individual is lost to the community.

SANITATION IN CUBA—THE ABOLITION OF YELLOW FEVER—MALARIA—PROBLEMS TO BE MET IN CONSTRUCTION OF PANAMA CANAL.

By WILLIAM BAILEY, M. D., Louisville, Ky.

Some observations made during my recent visit to Havana may prove of some interest to the profession. The occasion was the annual meeting of the American Public Health Association. This body is an international one, made up of representatives from the Dominion of Canada, Republics of the United States, Mexico and Cuba.

The occupation of Cuba by the United States gave opportunity for the study of tropical diseases as had not been possible before. Sanitarians had often advised that the United States should expend hundreds of millions of dollars in the purchase of Cuba in order that by control we might be relieved of the constant menace she was to us by the introduction of yellow fever into our States bordering upon the Atlantic and Gulf of Mexico. History shows that no month in one hundred and forty years had elapsed without a case of yellow fever in Havana.

Providentially Cuba came into our possession by the so-called Spanish-American War. The opportunity was ours and right well was it such. Besides the most thorough methods of cleanliness a Board of Medical Officers was appointed "for the purpose of pursuing scientific investigations with reference to the acute infectious diseases prevalent on the Island of Cuba," and under written instructions from Surgeon General Sternberg the board was to "give special attention to questions relating to the etiology and prevention of yel-

low fever."

This Board was fortunately made up of such men as Walter Read, M. D., of the Medical Corps of the United States Army, and such assistants as acting surgeons of the same corps, Drs. James Carroll, A. Agramonte, and Jesse W. Lazear. The success of the Board was very largely due to the fact that at this time Maj. General Leonard Wood, U. S. V., was the Military Governor of the Island. Being a physician he fully appreciated the subject in interest and Dr. Read says "without his approval and assistance these observations could not have been carried out."

The first work of the board was done in the laboratory testing the claims of Sanarelli that the bacillus icteroides is the essential cause of yellow fever. This claim was decided in the negative as it did not comply with all the postulates laid down by Koch in such claim.

Other claims of like character were dismissed with the statement that "the specific cause of this disease remains to be discovered."

The next inquiry made by the board was in regard to the manner and the means by which yellow fever is propagated from individual to individual. These investigations were honestly made, seeking solely for the truth. They were surrounded by all measures necessary to eliminate error and to my mind a complete demonstration was made. Dr. Carlos Finlay, of Havana, the retiring president of the A. P. H. A., had since 1881 advocated the theory that yellow fever was propagated from the sick to the well by means of the mosquito. It remained for the board to demonstrate scientifically that this theory was true, also that, of the twenty-seven varieties of mosquitoes in Havana, only one was capable of acting as the intermediate host for the parasite. I wish time permitted me to go into the detail of this work. The variety of mosquito is known in natural history as the *stegomyia fasciata*. It was established beyond doubt that, when this mosquito fed upon a yellow fever patient in the first few days of his illness, after fourteen or more days it was able to inoculate the non-immune with the disease. After the bite the disease developed in from two to five days with usual symptoms and course.

After this it was established that the disease could be communicated by taking blood from the arm of the sick and injecting it under the skin of the well; yet this fact did not help in determining how the disease is ordinarily communicated from one to another. It was necessary to determine if the disease could be taken by coming into intimate relation with clothing, etc., which had been used and soiled by patients sick with yellow

fever. Many non-immune persons were brought into intimate contact with the bedding and clothing taken from yellow fever hospitals soiled by use, with black vomit and other dejections from the sick. It was established that yellow fever could not be propagated by fomites. So by consensus of opinion it is agreed the disease is communicated solely and alone by this one variety of mosquito.

Along this line alone has the work been done in practically ridding Cuba of yellow fever. This to my mind is the greatest discovery in medicine since the work of Jenner. Allow me in this connection to mention an object lesson afforded us during our visit.

I arrived in Havana on the morning of January 5, 1905. The steamer, Dora, arrived in the harbor on the morning of January, 4th., direct from Colon, Panama. Three persons were found sick with yellow fever, having developed the symptoms in passage on the 3rd. They were received at the dock in ambulances which were screened. They were driven through the streets and taken to Las Animas Hospital where they were placed in wards securely screened, and in addition, for more thorough protection, a mosquito bar surrounded each patient's bed so that no mosquito in Havana could be infected and so spread the disease. On the morning of the 6th., I paid my respects to Dr. Finlay, who was the President of our Association, as well as the head of the sanitary forces of Havana. He telephoned to Dr. John Guiteras, who is in charge of Las Animas Hospital, that I would call at the hospital at one o'clock. I wish here to express my thanks to these two noble doctors for many kind favors and attentions while I was in Cuba.

I found that one of these patients had died that morning and the post-mortem fully confirmed the diagnosis. I visited the two women sick with yellow fever, as I would have visited a case of typhoid. The assistant in the laboratory was a non-immune and also many nurses and patients in the same building. Both husbands of the two sick women remained constantly beside their wives until death terminated their watching. These men were permitted to go at will after the deaths, because they had passed more than five days without the possibility of being bitten by an infected mosquito. This is established as the limit of time for incubation. The people of Havana have no anxiety when cases of yellow fever are introduced under such restrictions.

No case of yellow fever has developed in Havana since September, 1901, notwithstanding many cases in the meantime have been brought to the city and have been managed as

these cases were. What a boon to our southern States if this policy shall be pursued!

The modification of the methods of quarantine which must inevitably be made as a result of this experience in Cuba will relieve our coast cities of great financial loss. It is estimated that the loss to the South in commerce alone in 1878 was one hundred millions of dollars. Commerce may now go on unrestricted if proper care is taken of the mosquito.

Much of the interest is lost in this recital because space will not allow detail.

It has been demonstrated that so-called malarial affections are propagated by another variety of mosquito named anopheles. We are more fortunate in these affections than in yellow fever, for the reason that the parasite has been determined, found both in the blood of the patient and in the body of the mosquito. Its life history has been studied both in the patient and in the body of the mosquito as a host. It has been established beyond question that persons may remain indefinitely in what have been regarded as the most deadly malarial districts with impunity if they are protected from the bite of the mosquito. What a blessing to humanity if these affections, so wide spread, so manifold and so fatal, can be brought under control! Many conditions in health all over southern and tropical countries are characterized as "malarial" without evidence of the parasite.

Laymen often confide to the physician that they have been the subject of malaria for years, and either through ignorance or an indisposition to make a thorough diagnosis, this is accepted by him without investigation.

We have in malaria a tangible parasite which can be studied by both sight and measurement, and its absence after observations repeated often enough to eliminate possible errors of technique, ought to exclude malarial disease.

The average doctor finds it so easy to satisfy the mind of the public and to thus cover up errors in diagnosis due essentially either to ignorance or want of thorough work in diagnosis. This question becomes one of exact inquiry, as much so as finding the specific germ of diphtheria.

The relation of mosquitoes to the propagation of these tropical fevers apparently ought to simplify the work in protecting the lives of persons living in both tropical and semi-tropical countries. It ought to enable the government of the United States to consummate its work in the building of the Panama Canal without such loss of life among its operators

as characterized the work already done by the French.

With good pure water, food wholesome in character which has been properly cooked and properly served, and protection from mosquitoes, persons ought to live in health in Panama. By these means we ought to exclude typhoid fever, cholera and other water-borne diseases, many diseases of the alimentary canal, and lastly yellow fever and malaria. Yet the problem is not of certain nor easy solution. We know that men of the highest character are constant violators of sanitary laws and when we take into account the habits and manner of living of persons ordinarily engaged in such enterprises as this we can realize the difficulty in securing the observance of regulations necessary to prevent such diseases.

MEDICAL INSPECTION OF PUBLIC SCHOOLS.

A review of the advance and achievements of preventive medicine would not be complete without a discussion of the possibilities of medical inspection of public schools and a short account of what has been accomplished in various countries and the several cities of the United States in which such inspection has been instituted. Dr. William S. Chase, of Akron, Ohio, (*Cleveland Medical Journal*, February, 1905,) gives a most interesting account of the advances along this line in foreign countries and the United States. We regret to say that very little of this work has been done in the United States, where the subject has not attracted the serious attention from the profession at large to which it is eminently entitled.

In France the first medical inspection law was passed in 1833, reorganization was effected in Paris in 1878 and the system placed upon its present footing in 1884. Each inspector has fifteen or twenty school-rooms under his supervision, a visit to each school-room being made at least once in two weeks. His salary is 800 francs (\$160.00) per year. In Germany there is no uniform plan but usually the inspector visits the schools under his charge at least once in two weeks. Contagious disease and visual and auditory defects are sought, and each pupil is measured and weighed periodically. These records are all kept on file.

In Switzerland a careful method of inspection has been instituted by the cabinet. Each child is given a thorough medical examination on first arrival at school. The mentally deficient may be sent to a special class or institution. Insufficiently developed

children may be referred to Kindergarten, or the day of admission postponed for a year. The special aim of the inspection is to give proper attention to eye-sight and hearing at the age of six; to eye-sight at the age of twelve, when the eye begins to grow fast; to the heart at the same age for the same reason; and to the teeth at the age of twelve, since at this age decay makes rapid progress. Strict watchfulness is, of course, maintained for infectious diseases.

In America the city of Boston was the first to institute a medical inspection of schools. The first appropriation for this purpose was made in 1892, but it was not until 1894, after a severe epidemic of diphtheria which cost several hundred lives, that a sufficient appropriation was made to make the system effectively operative. Medical inspectors are selected from the younger men in general practice, as they have the most time to devote to the work. For two hundred and fifty school buildings fifty inspectors are in service. The inspectors are paid a salary of \$200.00 a year. If children are found ill they are not permitted to consult the inspectors professionally, but are directed to the family physician or to a proper hospital. If the child makes complaint the teacher fills out a printed slip giving symptoms which have been observed, whereupon the inspector examines the child.

The children who come under inspection are divided into two classes: first, the subjects of contagious disease, where exclusion is demanded; second, those suffering from non-contagious, though perhaps severe disabling diseases; and those who are mentally and physically below the normal standard.

The result of a year's inspection of the Boston schools is shown in the appended report made by Dr. S. H. Durgin, Chairman of the Board of Health:

SUMMARY:

Specific Infectious Diseases	505
Oral and respiratory diseases	2,609
Diseases of the ear	87
Diseases of the eye	431
Diseases of the skin	3,431
Miscellaneous diseases	3,568
Found free from disease	4,959
	15,573
Number pupils examined in the schools	15,578
Number recommended to be sent home	2,055
Number consultations with teachers (about pupils return to schools, etc.)	3,440

I. SPECIFIC INFECTIOUS DISEASES.

Diphtheria	23	Erysipelas	2
Scarlet Fever	23	Syphilis	8
Measles	121	Tuberculosis	2
Whooping-cough	62	Malaria	4
Mumps	107		
Chicken-pox	108		505
Influenza	50		

The point is to be emphasized that the children suffering from the diseases enumerated were in regular attendance at the time.

In the early days of medical inspection in Boston a systematic inspection of the public school children was made for pediculi capitis; half of all the children of school age were found to be affected to a greater or less degree.

Medical inspection of public schools of New York City was begun in 1894, extended to Brooklyn in 1898, and in 1904 parochial schools and free kindergartens were added to the list. Dr. Chase states that the New York system of medical inspection of public schools is the most efficient now operative in any city of the world. The New York inspectors have the additional duty of visiting the homes of pupils absent for several days without excuse. These visits from November 2, 1903 to May 12, 1904, resulted in the detection of eight hundred and ninety cases of contagious diseases which had not been reported.

It has been conclusively proven that the backwardness of many pupils is due to physical defects, more especially of sight and hearing, which are not discovered and corrected at the time when the presence of such defects are most pronounced in impairing both mental and physical progress of the child. Dr. Frank Allport, of Chicago, recognizing the extreme importance of the routine examination of school children's eyes and ears, has already started on foot a movement looking to the adoption in all public schools of America of a simple system of vision charts and rules of instruction for the detection of defects of hearing, the actual work of testing the children being entrusted to the teachers themselves. This will be a notable advance over the present method of no test and no instruction at all, but certainly would seem to be much inferior to the plan of medical inspection already adopted by Boston and New York.

It is to be hoped that the question of medical inspectors for public schools will be taken up by all of the larger cities of the United States, and it is to be believed that the plan already operative in Boston and New York must necessarily soon come into general adoption.—EDITOR.

ATTEMPT AT SUICIDE NO CRIME.

If a bill introduced at Albany repealing Section 178 of the Penal Code becomes a law, it will no longer be a crime to attempt suicide. It is claimed that as it stands the law is a dead letter anyway, for there never is a conviction with sentence for this offense.—Medical Record.

AS TO MEDICAL ADVERTISING.

So many questions relative to medical advertising and what should not be admitted to the pages of medical journals—particularly journals published by medical societies or associations,—have been referred to the Publication Committee of the Medical Society of the State of California, that it has seemed desirable to formulate our various rulings into the following (*infra*) general principles.

If to these it is added that advertising copy should be edited with care, and that houses known to be disreputable or unreliable should be excluded, the ground is, we think, pretty well covered.

These rules are but concrete expressions of the Principles of Ethics, and the recommendations of the special Committee on Proprietary Remedies of the A. M. A. adopted at the Atlantic City meeting, 1904.

1. Advertising anything promotes its use; if this were not true, nothing would ever be advertised.

2. Every responsible publication must stand sponsor for the things which it advertises. This is particularly true of a medical society's journal, for,

3. It is the mouthpiece, exclusively, of physicians themselves.

4. The principles of ethics clearly and wisely state that it is derogatory to professional character for physicians to promote the use of secret remedies.

5. A medicine (or remedy) is "any agent or substance used in the treatment of disease" (Gould's Dictionary.)

6. A remedy must be classed as a secret remedy unless the quantities of its active ingredients are known to the physician who makes use of it.

7. In the case of a chemical, the true chemical name, and in the case of a mixture, the quantitative formula covering all active ingredients should be a part of all advertising statements of any remedy, in order that the physician who may be induced to use this remedy by seeing the advertisement will also be informed at the same time of the composition of that which he proposes to use.

8. Advertisements of remedies advertised to the general public should not be accepted for reasons too numerous and too obvious to demand space.

9. All untrue, improbable or extravagant statements should not be permitted to appear in the advertising pages when they would not be accepted in the reading pages, for to print such statements would be promulgating them

and it certainly is unethical to promulgate lies, actual or probable.

PHILIP MILLS JONES, Chairman,
(Unanimously approved by the Committee.)

(Circular issued by the Medical Society of the State of California.)

TUBERCULOSIS IN COLD BLOODED ANIMALS.

Kuster says that the results obtained by Friedmann and various other authors in attempting to immunize warm blooded animals with tubercle bacilli obtained from poikilotherms, or modified by a more or less prolonged passage through such animals, are sufficiently important to demand further investigation. He examined bacteriologically two hundred frogs and fifty other poikilotherms, and in three frogs found tubercle bacilli causing a disease similar to the tuberculosis described in other cold blooded animals. The lesion was most pronounced in the liver, which was filled with cheesy nodules. The organism grew readily on the ordinary media, with the optimum at 28 degrees C. At 37.5 degrees C. growth is arrested, and the cultures finally perish after the production of degeneration forms. Other cold blooded animals readily succumb to infection with the bacillus, and warm blooded animals perish after inoculation without having undergone bacillary infection in the usual sense. The author did recover the organism, however, from the body of a rat which died on the eighteenth day after inoculation, showing that a sojourn of this duration in the warm blooded animal does not suffice to kill the germ. Researches are being prosecuted in the hope of elaborating useful antibodies in the serum of experiment animals.—Medical Record.

STRABISMUS AND ITS TREATMENT.

C. M. Harris holds that strabismus is generally of the convergent variety, and in the vast majority of cases appears during the third and fourth years of life. These cases are as a rule monolateral and almost always associated in the deviating eye with poor vision; which may be primary or secondary to the deviation. Those occurring after five years are often of the alternating type, *i. e.* one or the other eye will fix indifferently. Good vision in both eyes is the rule, though the deformity is of course as great. Treatment should be instituted as soon as the deformity is detected, and should be carried out with patience and intelligence, or failure will result.—Journal of the American Medical Association, January 28, 1905.

FIFTY CONSECUTIVE CASES OF PNEUMONIA WITHOUT A DEATH.

The cases treated by W. J. Galbraith occurred in Mexico. His main reliance was upon quinine and tincture of iron. To the objection that the pneumonias were of a special type or with a malarial complication, he replies that he has never seen the latter infection in his district. The remedies named were given in large and frequent doses. In one instance 115 grains of quinine were given within a single hour. He strongly maintains that the use of alcohol and strychnine prior to resolution is harmful, as it increases the mechanical conditions distressing the patient. For controlling the nervousness and delirium of the disease he prefers bromide of lithium with chloral. He has discarded all external applications, and dresses his patients very lightly. Expectorant mixtures are seldom used except as vehicles. Syrup of liquorice and yerba santa makes an excellent vehicle for the quinine, and is also laxative. Carbonated waters should be avoided prior to resolution, as distention of the stomach interferes with respiration and embarrasses the heart. The cases referred to showed age limits of 7 and 56 years, respectively. The right lung (principally the lower lobe) was the seat of the trouble in 80 per cent. of the cases. He insists that such results as he has secured do not follow small or broken doses of the two remedies on which he pins his faith.—*Med. Record*.

THE PATHS WHICH INFECTION TAKES IN THE ORGANISM.

Boeri tells us that if bacteria be introduced into the sub-cutaneous cellular tissue they are carried into the blood by the lymphatic vessels. If they be injected into the blood current they are never obtained from the lymph of the thoracic duct. Hence, with regard to bacteria, the two circulations, blood and lymphatic, constitute two closed and distinct systems, or rather communicating from the first to the second system, and vice versa. This communication takes place at the mouth of the large lymphatic collecting vessels where they empty into the subclavian veins, and there is no communication between the two systems before this point is reached, or in the capillaris of the two systems.—*La Riforma Medica*, December 21, 1904.

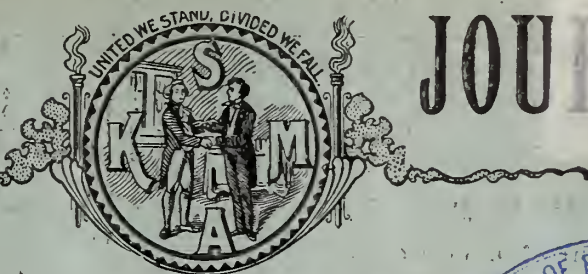
THE PROPHYLACTIC USE OF ERGOT DURING LABOR.

Prussmann believes that postpartum atony of the uterus can be effectively guarded against by the prophylactic use of ergot, in spite of the views of those who hold that the drug should be given only after the expulsion of the placenta. He has found the hypodermatic injection of ergotin the most advantageous method of administration, and considers that the best time to give it is ten to fifteen minutes before the birth of the child. The action of the drug is less prompt in primipara than in multipara. The author recommends the prophylactic use of ergotin in this way in all operative deliveries, in multiple births, hydramnios, in deformities, and fibroid tumors, in cases of deficient pains during the first or second stages, in cases in which previous labors have been followed by hemorrhage, and in all cesarian sections: The results obtained by this plan are very satisfactory, for atonic hemorrhage was observed in only three of two hundred and ninety-three cases of forceps delivery, and only once out of one hundred and two twin labors. Fifteen cases of hydramnios, tumors or uterine deformity were delivered without atonic complications.—*Medical Record*.

A NEW FIELD FOR RADIOTHERAPY.

The office of a genito-urinary "specialist," well-known to the readers of newspaper advertisements in this city, was raided last week by the police, and the two "doctors" and a clerk in charge were locked up in the Tombs. The evidence by which the indictment was secured was based mainly on an investigation conducted by Champe S. Andrews, Esq., counsel for the County Medical Society. It was learned by the assistance of a detective, who posed as a wealthy Western woman, that nearly \$10,000, the saving of a lifetime, had been mulcted from a carpenter who was being treated for alleged Bright's disease by means of "radium." This was supplied in ounce bottles, costing the victim \$1,500 each, and which required frequent renewal. Analysis of the solution of course showed no trace of radium. When the arrest was made, thirty-five well-dressed women were waiting in the sumptuously furnished reception-room of the "doctor's" office.—*Medical Record*.

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Being the Journal of the Kentucky State Medical Association.

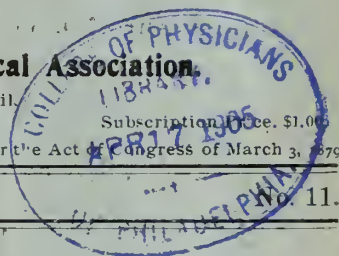
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Ethical Pharmacy 402

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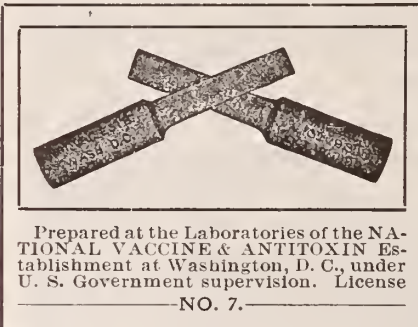
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DENTAL ADVICE TO THE GENERAL PRACTITIONER.

By H. B. RAY, M. D., D. D. S., Tompkinsville, Ky.

That the general practitioner can never rely on himself to give thoroughly competent dental advice in every case of dental practice is a truth which requires no argument or proof to be believed, but that the general practitioner is usually the first to see cases requiring dental attention is equally true, hence the necessity of his knowing the correct thing to suggest in the more common cases requiring dental advice.

It is not the purpose of this paper to go into a lengthy discussion of scientific nomenclature, but to merely call attention to the more common cases met with in every day practice, and to make a few suggestions as to what will give either permanent or at least temporary relief.

The condition most frequently met with is an aching tooth, and the patient comes demanding immediate relief, and too often he gets it at the expense of the loss of a good tooth, or, at least, of the loss of a tooth that could easily be made good. In order to properly treat this condition it is necessary to understand the cause which produces the toothache in order to be able to intelligently treat the case. Tooth-ache is essentially an inflammatory condition, and therefore in the majority of instances requires an antiphlogistic treatment. It is of two types; the first, and the one most frequently met with, is caused by an inflammation of the pulp of the tooth, called a "pulpitis." It is most frequently caused by the tooth having a cavity in it; the irritating secretions of the mouth constantly bathe the sensitive dentine, which transmits an irritation to the subjacent pulp, or nerve as it is commonly called. This irritation, like all others, means an increased flow of blood to the pulp, and the increased flow of blood requires an increase in the caliber of the blood-vessels to accommodate it. This increase in the caliber of the blood-vessels can not occur on account of the blood-vessels of the pulp being incased in the fixed walls of the tooth structure, and therefore there must of necessity result the most excruciating pain, inasmuch as the vessels of the pulp are circumscribed by a delicate membrane of the most

sensitive nerve tissue. The attempted dilatation of the blood-vessels presses this delicate membrane against the walls of the tooth, resulting in untold agony unless the proper means be brought to bear for the relief of the patient. If the above condition continues the cementum, that delicate membrane which surrounds the root of the tooth and is continuous with the membrane which encases the blood vessels of the pulp by means of the opening in the apex of the root of the tooth, known as the apical foramen, becomes also inflamed and thickened. This thickening of the cementum lifts the tooth up in the socket, causing the occlusion of the teeth to first come directly on the inflamed organ, which seems to the patient to be about a half an inch too long.

This constitutes the second variety of toothache, or pericementitis. The suffering incident to this condition is familiar to every general practitioner. It is that variety of toothache which comes to you with a big jaw, and has existed for a number of days or even weeks. The all important question is, "What can I do to relieve this condition?"

Before discussing the treatment of this condition it may be well to remark that that painful and troublesome condition known as alveolar abscess is sure to result if relief is postponed. It therefore becomes doubly necessary for the general practitioner to know just what kind of advice to give the patient in order that he may be spared the pain and consequences incident to this condition, resulting often in alveolar fistula, and in extreme instances even necrosis of the jaw.

Treatment.—All cases of toothache are primarily of the first variety, except those cases of a neuralgia pure and simple, which do not come appropriately in this category. As the general practitioner is almost invariably consulted in the earlier stages of the first variety, it is possible to prevent the more complicated forms in all cases if the proper advice is given and followed. Recalling the pathology of this condition, that it is essentially an inflammation, and that there is in at least 99 per cent. of all cases a cavity in the tooth, just what to do is a perfectly simple and logical matter. In those cases where there is a cavity but no nerve exposure the treatment is simple: apply a sedative and exclude the secretions of the mouth from the cavity; prompt relief will follow, and then advise the patient to visit a competent dentist. Here it becomes a matter

of interest to know just what agent to use and just how to exclude the secretions from the cavity.

A very effective agent and one always at hand is the oil of cloves. It should be applied by saturating a pledget of cotton with the remedy and introducing it into the cavity with a tooth pick, or other pointed instrument; that being done the secretions are kept out by filling the cavity with a little bees-wax, a household remedy always at hand. The wax can be applied by warming over a lamp on the point of a knife and forcing into the cavity. The wax filling serves not only the purpose of keeping the secretions of the mouth out, but prevents thermal changes from affecting the nerve when hot and cold things are taken into the mouth. In the more obstinate cases the oil of cloves will fail to give relief, and in that event the following formula known as "Heaven's Cordial" has gained quite a reputation.

R. Alcohol	oz. I
Chloroform	oz. II
Sulphuric Ether	oz. 3-4
Gum Camphor	oz. 1-2
Laudanum	oz. 1-8
Oil of Cloves	dr. 1-

M. Sig: Apply locally on cotton to the cavity.

This preparation will often give quick relief, especially when supplemented by the sinacine dental plaster applied to the gum just over the root of the affected tooth. These plasters are made by Johnson & Johnson, New Brunswick, N. J., and are for sale by all dental depots. These plasters should be in the armamentarium of every general practitioner, as they are inexpensive and will certainly make your patient call you blessed, and place him in a comfortable condition until he can get competent dental services.

Before concluding the subject of toothache just one word of caution relative to the wax filling recommended. Before attempting to insert the filling be sure that the nerve is not exposed, as the nerve will not tolerate the pressure incident to inserting the filling if it is exposed. That can always be determined by inserting a knitting-needle into the cavity; the slightest touch will cause an increase in the patient's suffering. It may be necessary to bend the brobe or knitting-needle at right angles to explore the cavities on the distal aspect of bicuspid and molars.

In the event of exposure of the pulp or nerve you are ready to ask: is it worth while to waste time trying to save the tooth? This question should be answered in the affirmative. The sinacine dental plaster will give relief until the patient can visit a dentist and

have the nerve devitalized and get the permanent relief demanded. The general practitioner can assure the patient that a competent dentist can remove the nerve at once and without pain. This may seem so unreasonable to the patient as to require an explanation. It is accomplished as follows: rubber dam is placed around the tooth to exclude the saliva and to keep the field of operation clear so that the remedy applied is not lost in the saliva, and the patient not disgusted with the taste of the drugs.

Anaesthesia of the pulp is effected under pressure, and the pulp at once removed by means of a little cocaine being dissolved in a minim of carbolic acid, picked up on a pledget of cotton, applied in the cavity and gentle pressure applied over the cotton with a large plugger with a piece of unvulcanized rubber interposed between the cotton and the instrument. As the pressure is made the rubber expands closely against the walls of the cavity, preventing the leaking of the dissolved cocaine, and the pressure forces the solution into the pulp tissues, causing anaesthesia in from five to ten minutes. With a nerve broach the nerve can now be removed leaving the patient completely and permanently relieved, and only requiring a filling of the tooth at a subsequent sitting.

The foregoing applies to the management of the teeth of the adult, and with slight modification applies with equal force to the teeth of children, unless the disposition of the child is such that the approaches of the physician or dentist will not be tolerated. In that event there is nothing to do but to persuade the little patient to have the tooth extracted. Before giving this advice to the parents of children, and acting upon it, the physician should be very careful to have in mind the age at which the permanent teeth are to be erupted, for the reason that Nature despises a vacuum and will attempt to fill up the missing space. If the time of the eruption of the permanent teeth is too far off the space becomes obliterated by a contraction of the jaw, and when the permanent teeth come to be erupted there is not sufficient room and irregularities of the teeth are sure to result. The rule should be that if it is more than one year before the permanent tooth is to be erupted under no circumstances should the deciduous tooth be extracted.

Therefore it becomes of interest to know the exact time of the eruption of the permanent teeth; this occurs as follows and in the order named: first molars, 6 to 7 years; central incisors, 7 to 9 years; lateral incisors, 8 to 10 years; first bicuspid, 10 to 11 years; second bicuspid, 11 to 12 years; second mo-

lars, 12 to 13 years; third molars, 17 to 25 years.

As a rule the most fatal mistake in extracting children's teeth is in that of the first molar, known in dental literature as the sixth year molar. This tooth is one of the most frequent to fall a victim to the ravages of decay, and the fond mother will always tell you that it had just as well be taken out as it has never been shed anyway; and too often the physician accepts her statement and out comes the sixth year molar. While it is true that the mother was correct in stating that the tooth had never been shed, it is equally true that it was never intended for it to be shed, as it is as much a permanent tooth as is the wisdom tooth, which is erupted at from 17 to 25. It therefore becomes necessary for the physician to have some invariable rule by which he may know whether he is about to extract a deciduous molar or a permanent molar. If the former, no injury has been done the little patient, as the permanent tooth will sooner or later come on; but if it be the first permanent molar, one of the organs of the body has been destroyed and irreparable injury done. The following rule is as invariable as the rising of the sun and will never lead you into a mistake. The deciduous teeth are ten in each jaw, making 20 in all, and the sixth year molar not only is erupted at the age of six years, but is the sixth tooth in the jaw beginning with the central incisor and counting backward. Therefore beginning in either jaw and counting backward until we come to the sixth tooth from the central incisor we have the first permanent tooth, the extraction of which is a crime amounting to the grossest malpractice. To extract this tooth at this time will as surely result in the contraction of the lower jaw, causing too much prominence of the upper jaw, resulting in distortion of the features for life, as will chloroform produce anaesthesia.

Irregularities of the Teeth.—The medical practitioner can never think of treating irregularities of the teeth, and as such cases are not of the nature of an emergency, it is therefore unnecessary to give any advice as to the treatment of such cases. However, as he is the first to see such cases, he should be able to detect a departure from the normal so as to enable him to know when to advise his patrons to seek dental advice on subjects of "Orthodontia."

Every physician recognizes the necessity of knowing the physiological standard to enable him to detect the pathological. This is as true in detecting irregularities of the teeth as in the solution of any pathological problem with which the physician has to contend.

The normal occlusion and articulation of

the teeth is as follows: the six upper anterior teeth close over the six lower anterior teeth from one-third to one-half of the length of the latter. The lower second bicuspid occludes between the cusps of the two upper bicuspids, and is the key to the occlusion; this is a point easily remembered. Each bicuspid and molar of each jaw, excepting the upper third molar, is antagonized by two of the teeth of the opposite jaw. Buccal cusps of the lower teeth close between the buccal and lingual of the upper, and the lingual cusps of the upper close between the lingual and buccal cusps of the lower. The six anterior teeth are arranged in the segment of a circle. The bicuspids and molars form an almost straight diverging line from the cusps, or eye teeth and stomach teeth, as they are vulgarly called, though the position of the third molars is somewhat outside of this line. In a word, the upper teeth occlude forward and outside of the lower teeth, the arch of the upper teeth being longer and wider than the lower. It is only possible for the face to have its ideal profile with this normal occlusion. Such a face will have the following proportions: from the hair to the chin will measure three fourths of the whole height of the head. The forehead to the root of the nose will measure one-fourth, the nose one-fourth and the mouth and chin one fourth. The distance from the root of the nose vertically to its lower border will be the same as the distance from this point to the bottom of the chin. Of this latter distance one-half is occupied by the lips and one-half by the chin. The nose, then, equals in length the lips and chin. With this physiological picture in mind, the general practitioner can easily detect a departure from the normal, and should advise his patients to seek the advice of a dentist whenever there is any deviation from this standard. Especial care should be taken with these cases when young, for then is the time at which the corrections are easiest made, and many a face which would by neglect of proper advice at this time become a hideous monster, can by the simple correction of irregularities be made symmetrical and beautiful in all of its proportions.

Advising Patients To Have All of Their Teeth Extracted.—The general practitioner is the first to advise patients to have all of their teeth extracted, and such advice should always be given with great caution, for the reason that the patient has more confidence in the family physician than in any one else, and rightly so; and an opinion from the family physician, if it be wrong, can not be overcome by the dentist, for the reason that the patient thinks that the doctor knows as much about dentistry as any one else. It is often the

case that all the patient's suffering is caused by only one or two decayed teeth, and because he has a neuralgia reflected to all of the teeth and possibly to the ear and eye, in fact to every branch of the fifth nerve, is not sufficient reason for such radical advice, as artificial plates are, at best, a mere makeshift. If the teeth are almost all badly broken down and no sound teeth are left which may be used for abutments to which bridges can be suspended, then the practitioner may unhesitatingly advise the removal of all of the teeth. But if teeth are remaining in the mouth which are firm in their sockets, and are sufficiently well distributed over the entire dental arch, then bridge work should be advised, as with it a near approach to the usefulness of the natural teeth can be attained.

One other condition often met with by the general practitioner is known as pyorrhoea alveolaris. On inspection we find, as the name would indicate, pus oozing from the necks of the teeth. It has its origin from a diseased alveolar process and is found in most instances where there is a uric acid diathesis.

In the early stages of the disease large accumulations of salivary calculus are found on the teeth, as a rule, and the gums are thus crowded from the necks of the teeth leaving the cementum exposed causing irritation and ultimately ending in pus formation. These pus pockets often burrow deep into the tissues, sometimes even to the apex of the root, causing the teeth to become loose and in extreme cases the teeth fall out. This condition is one of the most unhealthful of any ever found in the mouth, and one of the most prolific sources of digestive troubles and general systemic infection. Cases often occur of general weakness and pyemic infection baffling the skill of the best physicians, and too often the mouth is never thought of, and the patient goes on swallowing pus from day to day until the general health becomes permanently impaired.

Much may be done by the practitioner by the systematic use of a mouth wash. None is better for this condition than peroxide of hydrogen, but the advice of the dentist should be recommended to the patient to cooperate with the physician in removing the accumulations from about the necks of the teeth and alveolus, after which the antiseptic measures recommended by the physician will be more effective.

In dentistry as in medicine, the subject of prophylaxis can not be over estimated. In the mouth we have the conditions of moisture and warmth, the two conditions ever present causing fermentation. This fermentation results in the formation of vitiated secretions which tend to the breaking down of the tooth

structure, the propagation of disease germs, which are constantly being breathed into the lungs and swallowed with the saliva; hence dental prophylaxis is of paramount importance to the general health of the patient.

To overcome the conditions just described, the use of a dentifrice just after eating is necessary. Uthymol tooth paste used on the tooth brush just after eating is a means of great value. The method of application consists in squeezing a small portion from the metallic tube in which it is contained; by means of a simple twist of the wrist, after taking it from the tube onto the brush, it is thoroughly distributed over the teeth, the brush moving up and down on the teeth, thus getting into the low places and removing the accumulations from between the teeth; after which follow with simple water, giving the teeth a thorough washing both on the buccal and lingual surfaces. Any other good dentifrice may be used, if known to the physician not to contain an excess of acid or an alkali, either of which if too strong, will attack the enamel and injure the tooth. After the brush has been thoroughly used, the question of picking the teeth becomes of interest. This can not be properly done with either wooden or quill tooth-picks, as they can never be made to pass the point of contact between the teeth, and only tend to pack food and secretions at this point. Patients should be advised to pass a silk thread between the teeth, as by this means the contact point is kept as clean as the labial surface of the teeth, and any disease germs that may have found lodgment at this point will be mechanically removed before they have time to multiply and do mischief.

WATCHING THE PENDULUM, OR THE UPS AND DOWNS OF MEDICINE AND MEASURES SINCE MY SHORT ACQUAINTANCE WITH MEDICINE.*

By E. B. WILLINGHAM, M. D., CUNNINGHAM, KY.

Mr. Chairman, and Gentlemen of the Carlisle County Medical Society:

Since organization has become the watchword of the medical profession, and the county society is the corner stone of this great structure, it is natural for the greatest aspiration of a young M. D., to be president of his county society. Having received this honor I beg to offer you my sincere thanks, and to assure you I have given, in my awkward way, my best service. It is the fashion for the re-

* President's annual address before the Carlisle County Medical Society, December 6, 1904, at Bardwell, Ky.

tiring president to give an account of his stewardship, furnishing a practical statement of the ethical and fellowship affairs of the body over which he presides. I shall not undertake a study of the history of this society, feeling sure that each member in full fellowship is aware of its splendid condition, and too complimentary terms could not be used of this small but hard working ethical body of physicians.

My subject to-day is, "Watching the Pendulum, or the Ups and Downs of Medicine and Measures Since My Short Acquaintance With Medicine." It was in my medical embryonic state, when I was in close touch with the leading medical lights in 1891, that Koch announced the discovery of tuberculin, the medicine that would throttle tuberculosis, the greatest scourge of the world. Our faculty, except one, accepted it as proven and almost laughed to scorn the one not receiving it with enthusiasm. Of course such a long-sought cure from such an authority as Robert Koch was some excuse for this mistake, but it seems to me that men of experience like some of them, knowing the ravages of the disease as they did, would have been more conservative. I continued among them until this reaction wore off and it went to the other extreme with some, considering it dangerous. Others held to it as a valuable diagnostic agent, and in the last three or four years there has been a gradual reaction among men who are making a specialty of treating tuberculosis, who claim it is a valuable agent, both in therapeutics and diagnosis. However, it is not to be handled by a common practitioner.

The next to follow was Behring's diphtheritic antitoxin, which was proven to be of unmistakable value. This was followed by a serum for almost every disease of any severity. And all of them, except the diphtheritic antitoxin and possibly anti-tetanic serum, we might say are failures, or at least, as the Scotch verdict has it, not proven.

Along in this same embryonic medical state I observed the wrangle between the aseptic and antiseptic enthusiasts. The antiseptic surgeon, in his endeavor to obtain more excellent results in contrast to the old methods and the new methods of asepsis which his competitor advocated, employed mercuric chloride and other antiseptic medias so strong that the tissues were actually cauterized thereby; if suppuration was not produced healing was at least greatly delayed.

From this general principle of antiseptics a natural reaction ensued and a number of leading operators enunciated a fact since widely recognized, that asepsis is preferable to antiseptics in the vast majority of cases, and that clean hands, clean instruments and a clean

field of operation would produce even better results than when drugs were used.

More recently still the reasons for this have become more evident. These reasons are not as fully appreciated as they deserve and we are wont to forget that the blood is a powerful bactericide and that microorganisms exposed to it in moderate numbers are not only destroyed in the sense of being rendered inactive, but actually disappear as well. The rapidity with which the bacteriolytic power of the blood is exercised depends upon the vital resistance of the individual. It must therefore be remembered that powerful antiseptic substances may do much toward destroying the bacteriolytic power of the blood, and so in our endeavor to do good we may not only harm the tissues of the patient but remove nature's antiseptic which is not only protective in the sense that it destroys infecting microorganisms, but also in the sense that it aids in the rapid healing of the wound.

Vaginal antiseptic douches prior to labor, with the idea of rendering the canal aseptic, have not only been proven to be worthless but actually a harmful procedure.

Sir Dicy Duckworth, of London, expresses my ideas with more force than I can command, in regard to the employment of new and untried remedies to the exclusion of those which have been tested. "There can be no doubt that this tendency on the part of physicians exists to an extraordinary degree and it undoubtedly owes its existence to the fact that in our struggle with disease we have such an uphill fight that we are often ready to grasp at straws, with the hope of assistance and with little more intelligence than the drowning man who seizes anything he may feel or see, in the hope of being saved."

The second reason is, I think, the competition we meet with in patent medicine, honored by the testimonial from the layman. This brings in the manufacturing druggists with their traveling salesmen with a drug, or a combination of drugs, to meet every patient. Medicine for any or all diseases on the market, all of them fresh, made of fresh drugs—the newest and freshest of them all those hardest pressed for sale.

For instance, all have all kinds of wonderful Laxative Bromo Quinine, Syrups on Pine and Tar against Dr. Bell's Pine Tar Pine and Tar against Dr. Bell's Pine Tar Honey, Anti Malarial Pills and Solution, with formula attached, to go against the innumerable cure-alls including Predigested Peptonized Protoplasmic foods easily assimilated either with or without a stomach, Chill Tonics, Anti-Constipation Pellets, to meet the competition of Dr. DeWitt's Little Early Risers—and so on down the line.

These are all very nice and handy, and I must say some of them are better than the older remedies. But does it not produce a laziness in prescribing, a forgetfulness of our chemistry, compatibility and even the physiological action of drugs? Also a tendency to shot gun prescriptions, which is condemned by all scientific teaching? I admit that I use them, but mainly in troubles where there is no perceptible pathological condition existing, and especially for those who came in and ask for such drugs. It has been my experience that when one has a real pathological condition, as in bronchitis, la grippe, pneumonia, rheumatism, malaria and other diseases which might be mentioned, he has to dispense with our proprietaries and get down to single drugs, giving them on their therapeutic indication. But we do harm by pouring drugs, of which we know little, into the system, of which we know less.

To an American physician, Fitz, of Boston, is due the honor of bringing into existence appendicitis, about 1887. They caused typhlitis and perityphlitis to go away back and sit down, and I must say, to watch the procedures in this one disease has been an arduous task. "There is no medical treatment of appendicitis," says Osler. He further says: "So impressed am I with the fact that we physicians lose lives by temporizing with certain cases of appendicitis that I prefer in hospital work to have the suspected cases admitted directly to the surgical side." The surgical side to my hospital is rather limited, and considering the fact that this disease is of an insidious nature, sometimes hard to diagnose, the natural dread of the layman of the knife, also that there are good authorities who claim eighty or ninety per cent. recover without operation, and the further fact that surgeons among themselves agree that operation should be done early, or wait until severe symptoms have subsided, all go to prove that there is necessarily a medical side to this disease.

There are two points in the treatment of appendicitis on which the profession is divided, namely, the use of opium and saline purgatives. Opium is given in some form in appendicitis almost universally by physicians against the protest of the surgeon. They claim that it masks the symptoms and gives a sense of false security. My experience has been that it is impossible to control the patient without its use. And the use of saline purges early in the disease, as advocated by some surgeons and physicians is, it seems to me, an injurious practice: first, because we produce motion or movement in the bowels, thereby breaking first principle in the treatment of inflammation; and second, because usually there is no need for the first five or

seven days to give any concern about moving the bowels, and it is not unusual for them to move while taking large doses of opium under the stimulus of high enemas. However, this point is not settled and I doubt if it ever will be. Neither is the operation question, any further than the concession that it is not the best to operate on all cases at any time, and that early and late operations are the ones practiced by the best and most conservative surgeons.

Both the medical and dietetic treatment of typhoid fever have changed several times since I received my instruction. Quinine in from twenty to thirty grain doses as an antipyretic and the coal tar antipyretics, have lost their hold; and while I think they have been condemned unjustly, they cannot be claimed as ideal remedies. Brand method has come nearer than any other treatment being a success, as has been shown by statistics. This method has not met with approval in private practice, both on account of its difficulty and exaction and the resistance of the patient. This has had a tendency to substitute sponging, the use of hot packs and other measures. Hare claims that sponging is more easily carried out, less wearying to the patient and with friction properly administered, will give better results than the full bath. He also rather condemns the gradual bath, claiming it does not produce the shock necessary to the beneficial effects of the bath. This has not been my experience and, while I have depended mainly on sponging and hot packs to control the fever, on account of nervous conditions I have had cases where the whole bath had to be resorted to, and in every case using the graduated bath when rightly carried out, it has proven to be life-saving.

This may seem to be putting it pretty strong, but in extreme cases where the fever is running extremely high with all the concomitant symptoms, the full bath given every four hours in water at eighty-five or ninety degrees, gradually cooled until the fever drops three or four degrees will, if persisted in (regardless of what the kinsmen may say about the patient's being too weak), not only control the fever but also all untoward symptoms.

The scientific side of this subject is rather against intestinal antiseptics, but I think almost all will agree that some of them given early, when indicated, are of undoubted value. Of late is being urged by eminent authority the necessity of a more liberal diet, and the claim is made that by liquid or starvation diet the patient is rendered unfit for the long, exhausting disease which he has to undergo. Such a diet consists of eggs, bananas, roast chicken, meat broths and large quantities of

milk, and other solids if the stomach seems to take them well. Possibly the pendulum has swung too far to the starvation side, and it is to be hoped that it can be demonstrated that a more nourishing diet can be safely used; but to my mind it seems very doubtful. I have failed to ever reach the amount of liquid laid down in text books without doing the patient harm.

The introduction of weak saline solutions, or normal salt solution, into the subcutaneous tissues and blood vessels was brought prominently before the profession by Contoni during the cholera epidemic of '92. This has been found to be of great value in a number of conditions. It seems to restore vascular fulness when from any cause the volume of blood has been reduced, to dilute and eliminate any toxic substance from the blood by promoting diuresis. The introduction of large quantities of this fluid by either hypodermoclysis or infusion, is to some extent a rather technical procedure, and I have generally substituted enteroclysis, or the introduction of this fluid into the colon, which has proven to be of undoubted value, the merits of which were demonstrated by this same man Contoni.

Our attention is very often called to the importance of making an accurate solution and not being content with the common way of using a teaspoonful of chloride of sodium to a quart of sterilized water, claiming that the addition of calcium and potassium in the proper per cent is essential to the full physiological effects, a point which I think should be observed if the fluid is thrown directly into the circulation.

Many other medicines and measures have made their appearance before the medical world, some of which have stood the test of bedside experience; others have gone where the silent sleep, but these of which I have spoken are commonplace and are pertinent to the general practitioner; and, while I do not hope in this article to settle the pendulum or check its swing in any way, I present them to you as I see them, looking through the light of other men's knowledge in so far as it agrees with my experience, in as brief a manner as possible; and having trespassed on your time and patience more than the merits of this paper deserve, I thank you once more for having had the honor of serving you one year as president.

ANEURYSMAL VARIX OF LEFT SUB-CLAVIAN.*

By JOHN D. TRAWICK, M. D., Louisville, Ky.

CASE REPORT.

The Patient. J. T. S., of Irish descent, tall strong, specially fitted by nature for his office of City Marshal in a nearby Kentucky town, gave no history nor indication of syphilis.

History. Dr. J. R. Steel, of Junction City, who referred the case to us, gave the following facts in history: Three years ago S., in attempting to arrest, unarmed, a desperate character, was shot just above the left knee, the bullet ranging downward and inward producing intracondylar fracture. He fell to left side, caught himself on left elbow, and in this semi-prostrate position, received a second shot. This time the bullet grazed the point of the chin, entered at left sterno-clavicular junction, ranged outward and was lost somewhere about the left shoulder joint. Though skiagraphs were made and the fluoroscope used the bullet was never located, nor was an exploratory incision able to disclose its whereabouts.

Patient stated that a few hours after the injury, numbness and tingling in the fingers of his left hand were most annoying. The injury to patient's knee healed, leaving about two inches of shortening of the limb. The wound of entrance in chest wall gave no trouble. About six months after, swelling was noticed in left hand. Cramp began to be frequent and painful, involving mainly the thumb and first finger. Swelling extended up the arm, the veins became very prominent and distorted.

Two years after the injury his arm had become so large that it was practically useless. Ulcers began to appear: one, just above the elbow joint on external aspect, persisted. During the succeeding months there was history of repeated violent hemorrhages from this ulcerated area. The hemorrhage was described as "shooting up in a steady stream as though the blood were under great pressure, but without jetting." Anything that could be seized upon was used as a compress to control the hemorrhage. The raw surface of this ulcer was a favorable field for septic absorption.

We saw patient about three years after the injury and found briefly, the following conditions: An anemic subject, evidently from violent hemorrhages, temperature at time of entrance into infirmary, 104. On the way down to the city, the night before, he had a violent chill, followed by profuse sweat. In

*Read before the Jefferson County Medical Society, Louisville, Ky., Februar 5

preparing for the journey, possibly from incautious movement of the arm, quite profuse hemorrhages occurred. Urine negative. Left arm from finger tips to shoulder enormously swollen and useless. Swelling extended over shoulder to base of neck, behind over scapula, in front and downward to left nipple line. Patient could not move member unassisted.

Varicosities were irregularly distributed from elbow to neck. On internal aspect of arm, on line with deltoid insertion, was a mass of distorted veins, tense, apparently ready to rupture at the slightest provocation. Over acromion was a sinus four inches long, in which a finger could be laid. Scars of healed ulcers presented at various places. Over elbow was an ulcer extending antero-posteriorly two and a half by one and a half inches, in the midst of which was a heaped-up mass of granulation tissue. A plug of clotted blood closed the mouth of a vein in this mass. From this spot had occurred the frequent violent hemorrhages. Pulse beat could not be felt in left radial. A diffuse thrill was evident over clavicular region, without distinct expansile pulsation at any point. No tumor was discernible. Stethoscope showed normal valve closures of the heart, but rather labored systole. Two inches below mid point of clavicle a blowing sound was most marked, synchronous with cardiac systole. Just behind clavicle a continuous bruit was noted, which did not abate on diastole. Blowing sound was easily heard along the distended vein mentioned above, down into the arm. The condition was recognized as an arterio-venous aneurysm of left subclavian.

It is known in a majority of instances to be impossible prior to the actual exposure of tumor in field of operation, to discriminate between the *varicose-aneurysm* type (that is, where the blood passes from artery into a sac, thence into a neighboring vein), and the *aneurysmal varix* (where there is no sac intervening but a close union between the injured artery and vein).

In consultation on Sunday morning, June 26, 1904, it was unanimously agreed that the only answer to patient's emphatic demand for "something to be done" was that operation should be attempted at once. The desperate nature of the case was fully appreciated by the patient, family, and those in charge of the case, and the treatment of the lesion was determined upon which seemed to offer most hope for immediate relief, and if by good chance, then permanent cure.

After twenty-four hours' rest the patient's temperature had subsided, his spirits were most tranquil and the outlook was at least not

more discouraging. Tuesday morning, the 28th., at operation it was determined to lay bare the subclavian field by resection of clavicle. On exposure of the tumor it was evident that to proceed towards the first portion of the artery would be foolhardy. The overlying platysma and fasciae acted as reinforcement to the distended sac which had presented, and to remove this reinforcement meant rupture almost certainly. Proceeding then to amputate at the shoulder joint, axillary arteries and veins were caught in their anomalous relationships and ligated, so that what had been determined upon at first as a distal ligation of subclavian followed by amputation practically resolved itself into amputation. The operation was performed by Drs. W. C. Dugan, Trawick, Abell and Reesor, Dr. Ireland administering the anesthetic. Every precaution was taken to control hemorrhage, and that care and speed were employed which the condition of the patient and lesions demanded. The patient gradually sank and the not unexpected end came thirty-six hours after operation.

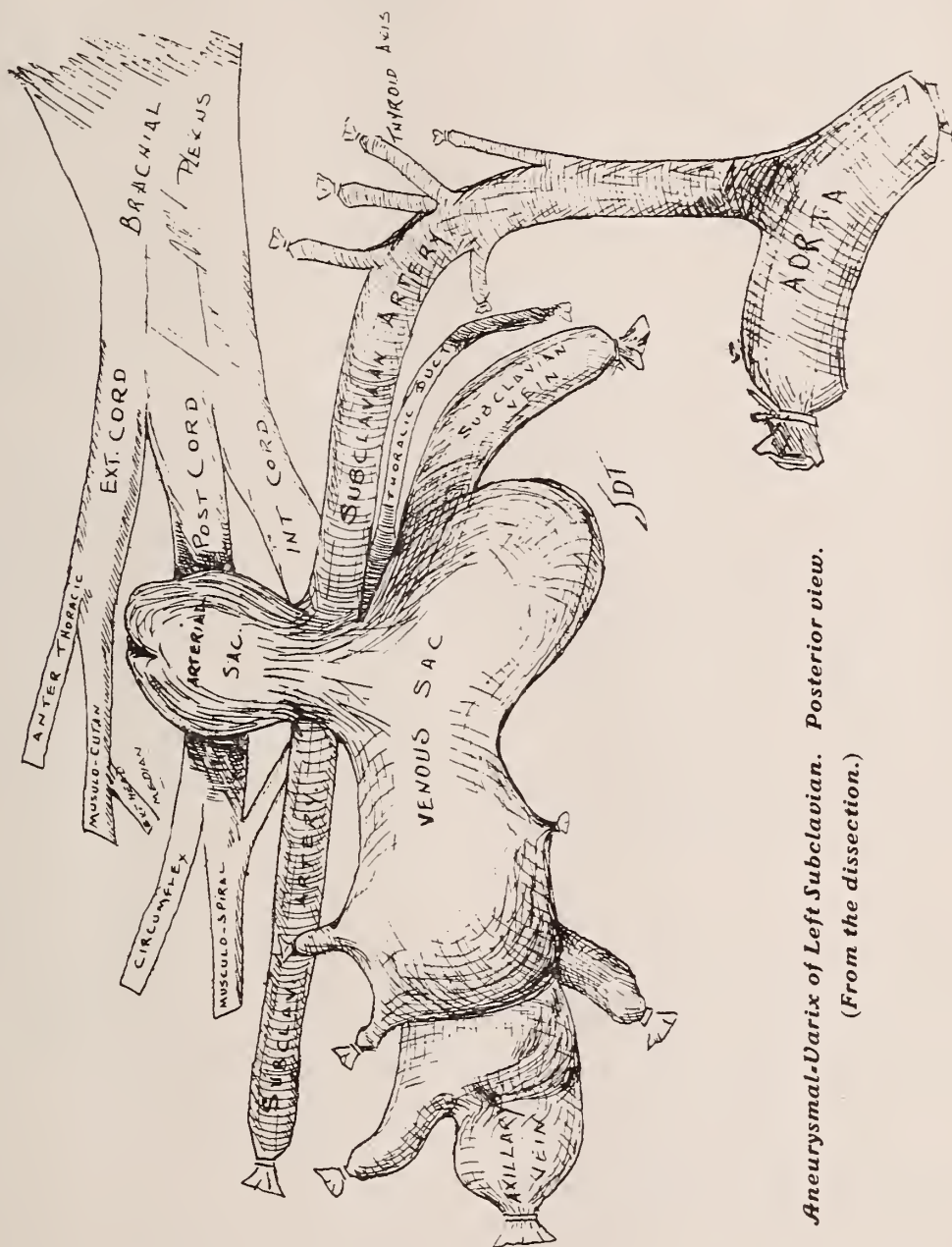
At the post mortem the track of the bullet could be traced a portion of the way, at least. Sternal end of left clavicle had been clipped off; the bullet burrowing outward and downward had passed between the subclavian artery and vein at the second portion of artery. Subclavian was severed at its origin from the aortic arch. Brachial plexus was severed and the mass removed. On clearing up the adhesions we found, as the specimen before you discloses, one sac presenting below the artery, evidently venous, and a smaller sac presenting above and underneath the flat cords of the brachial plexus, and intimately adherent to the *posterior cord*, evidently arterial in structure. Between these sacs there is intimate union of artery and vein. Detailed examination of the sacs showed that calcareous degeneration had taken place in upper smaller sac, so that an eggshell like substance lined the interior, but that at the most prominent portion of the larger sac the sac wall was distinctly thinner and less likely to stand much pressure from within. Fluid injected into the subclavian artery distended first the smaller arterial sac, then the large venous sac and passed out of the distended veins and only on great pressure out of the arterial branches.

The mass of distended veins was most troublesome to control at operation and had to be ligated en masse. On dissecting down the arm to the ulcerated area mentioned from which such hemorrhages occurred, the vein proved to be the median basilic, distorted and anomalous in position, presenting in the midst of the ulcerated area a knuckle, one side of

which had eroded, and through this the bleeding had taken place.

Aside from the interest attached to so rare a specimen pathologically, the question of treatment claims considerable attention, and with the advent of smaller caliber bullets and consequent greater frequency with which ar-

an extensive lesion, with entire absence of constitutional history that could lead to suspicion of aneurysm from any other than traumatic causes, together with the desperate condition of the patient, led us to determine at once that temporizing methods, such as medication, pressure, needling, wiring and so-



*Aneurysmal-Varix of Left Subclavian. Posterior view.
(From the dissection.)*

terio-venous aneurysms are met, we may well afford to consider their treatment. Confining our attention simply to this specimen, the treatments considered in consultation were of three classes:

I. *Conservative.* The history and evidence of trauma with the positive evidence of

called conservative measures were not to be thought of. There may be cases of aneurysm where these methods are applicable, but certainly not to this case.

II. *The Matas Method* was given mature deliberation, with the hope that it might be employed here. Bickham has suggested the

application of the Matas method to this special class of aneurysms "provided the conditions present offer an opportunity to apply the principles of the operation." This proviso leaves a large sized loop hole for withdrawal, for there may arise quite a number of "conditions" that would render its employment irrational.

Since proximal ligation has been uniformly fatal, and distal ligation successful in comparatively few cases, it is to be hoped that some modification or adaptation of Matas' method will result in improvement in these peculiar lesions.

As will be evident by referring to the specimen, the direct transfer of arterial pressure through the traumatic opening into the venous system histologically unfitted to accommodate the unaccustomed pressure, results in great dilatation of veins, with consequent slowing of blood current, stasis, edema and devitalization of tissue below. It is suggested that temporary ligatures be thrown about the artery and vein both proximally and distally if found necessary. The blood current being thus controlled, "incision is to be made into the distended venous sac, thus exposing the interior of vein and arterial communication. Suture up the opening of artery into vein in the usual Matas manner, then close the incised vein with continuous lateral sutures of Lembert type." This would be perhaps, an ideal method were it possible to adjust all the conditions.

In this case it was not possible to even reach the proximal portion of artery without serious risk of rupture of presenting and adherent sac. The overlying plexus and circulatory vessels were in too intimate contact with the site of lesion to admit of safe manipulation.

III. *Distal Ligation* was the method determined upon as the one offering most rational means of adaptation, to be followed by immediate amputation. Here was a distorted, septic, helpless mass of pathological tissue, viz. the edematous arm, which had to be removed. At the shoulder joint was the only available spot for removal to be accomplished. It is reasonable to believe that, had the lesion been recognized earlier, before constitutional vitiation had proceeded to such a desperate degree, ligation in the third portion of the artery followed by amputation might have relieved the patient.

THE COUNTRY OBSTETRICIAN.*

By W. R. BURR, M. D., Auburn, Ky.

The average village or country doctor, con-

sidering the broad field embraced in his professional duties, and the difficulties under which he labors, has as good, if not better success than his city brother, who, especially if he be well established in a practice, can, to a great extent, specialize his work, weed out the undesirable element, and therefore have better sanitary surroundings under which to practice his art.

The rural doctor must, or should be a general utility man, able to meet any emergency that may arise in his practice, and to surmount obstacles that are not dreamed of in the philosophy of one who has never trod the path he is called on to traverse.

And in no branch of his practice does he meet with more perplexing problems, and emergencies that put his wits to the test, than in looking after the mid-wifely cases that fall to his lot. But experience makes him self-reliant, and increases his skill, enabling him to surmount many difficulties that text-book knowledge fails to help him over.

It is not my intention to try to discuss the dyscrasias of the expectant woman, or the various presentations of labor and their management, for that would be presumption on my part. But my desire is to make some general observations on the management of uncomplicated obstetric cases by the country doctor, and to impress some points that we all know and have gained by experience.

The city doctor, if his clientele is among the upper tendon, can usually keep tab on his cases that are expecting confinement, and can have his patient, when the eventful period arrives, provided with an aseptic bed and clad in garments about which there is no suspicion of dirt or bugs. He can also have a trained nurse in charge, supposed to be sans dirt, sans bugs, sans everything that is infection-breeding; and he can make himself pure and spotless and array himself in a snow-white and stainless robe before he approaches the bedside. Surely if there is anything in being clean, and I am firmly of the opinion that there is a great deal in it, he should get brilliant results; but occasionally he gets into trouble, just as we do with our imperfect modes of procedure, and in spite of his red tape arrangements.

It is far from my intention, however, to depreciate precautions in the way of cleanliness in obstetric work, for if ever "cleanliness is next to godliness" it is so in the lying-in-chamber. But I am not a stickler for the minutia of preparation, which is preached in high sounding technicalities by the "rising young physician" in medical society meetings, and which we are admonished we must follow to the letter, unless we are hunting for trouble; and I believe that in village and country

* Read before Southern Kentucky Medical Association at Elkton, Ky., October 28, 1904.

practice, where we do the best we can toward cleanliness, without strenuously seeking asepsis and antiseptis, we get quite as good results as the average city obstetrician.

When it is possible, and we have had due and timely notice, we should keep track of the woman who is expecting us to attend her in the ordeal of child-bearing, and endeavor to correct as best we can all her departures from the normal condition. If she has any constitutional diseases or organic disorder, we should, of course, bolster her up as much as possible and fit her as nearly as we can for the trying time. Her emunctories should be kept active, and, especially toward the latter part of her term, her urine should be frequently examined; and the physician who neglects to look after these things, when he knows his services are going to be required, and it turns out that the patient meets with bad luck because of his negligence, is culpable in the highest degree.

I am not a believer in maternal impressions to the extent that I think deformities are produced in the offspring by the mother having had hideous impressions made on her mind while carrying the child in utero, but I am of the opinion that her environments while in this delicate condition have their influence on the mental and moral outcome of her child. The ancient Greeks, who were the most cultured and comely race in their palmy days the world has ever known, had the correct idea in regard to the treatment and surroundings of the expectant woman. They allowed nothing to mar her mental serenity, and she was kept constantly under the influence of all that was beautiful in music, literature, nature and art. This has been considered the reason for the beauty of their women and comeliness and learning of their men, the secret of their superiority over other ancient nations in letters, sculpture, paintings and valor. And I think if we would take the cue from the history of that wonderful race of people, and exercise care in keeping our women in an undisturbed and elevating frame of mind, allowing them to think of, and behold, only that which is true, beautiful and good, while enceinte, there would be marked improvement in the character of our people.

Unfortunately, though, the rural doctor's first knowledge that his services are going to be required to attend a case of labor is frequently when the affair is actually on hand, and he is called up at "the witching hour of night," when the mercury is devoid of ambition, or the elements are wild, like unto the night that Tam O'Shanter took his famous ride. Then perhaps, when he arrives, he finds the labor far advanced, or the second stage over, and he simply has to manage

things as best he can. In cases in which he has been retained, though, the lay attendant ought to see to it that, when the first symptoms of labor appear, the patient has a good warm water bath, given standing, as that is the best method to insure cleansing; that her bowels are moved well by an enema, and the bed properly prepared; and as most people have their personal and bed linen boiled in the laundering process, we can usually have our patient's clothing and bedclothing comparatively clean and her surroundings fairly good.

The physician in charge, if he has sufficient warning, should be scrupulous as regards his own clothing and ablutions. He should carry his own soap and anointing material, which ought to be of good quality and antiseptic. He ought also to see to it that his assistants are as clean as practicable in respect to their clothing and person. Of course some antiquated sisters who help on such occasions have heads of their own, and it is hard to make them realize the importance of cleanliness; but we should let them know who is boss, and insist, vigorously, even to the "reading of the riot act," that they follow instructions closely.

The doctor should be agreeable and cheerful in the lying-in-chamber, but should waste no time in useless talk and procedures. Let his actions be business-like and not too officious, since nothing is truer than the old axiom "meddlesome midwifery is dangerous." Examinations had best not be made oftener than is absolutely necessary to keep one satisfied concerning the progress of the case, and we ought not interfere with nature's processes, unless it is unavoidable. A woman is sometimes done incalculable harm by the meddlesomeness of her physician, who is attending her in labor and becomes anxious to get through with the case. I have made it a rule never to get in a hurry in a labor case, and have been fortunate enough to have had to interfere very seldom. We had better sacrifice a little time for the sake of a normal labor, and therefore a good recovery, than to hurry up matters, making the process abnormal, and thereby make chronic invalidism possible.

In only a few cases have I had to resort to forceps delivery, and I have only had a few cases in which there was any trouble following delivery.

Sometimes I give quinine with the hope of stimulating contractions, but have used very little ergot, and when I did I invariably felt as if I would have gotten on as well, if not better, without it. The primipara, I am satisfied, should seldom, if ever, have ergot; and the multipara rarely shows a condition demanding it. The temptation to spur a case up and

get through with it is often hard to resist, but yielding may bring trouble.

Nearing the end of the second stage of labor, I think some cases demand and should have, a little chloroform, especially if we are dealing with a timid, nervous, primipara; and, of course, we should guard well the perineum, by holding back the head, and supporting the parts, until they have been put thoroughly on the stretch, and, if possible, shell the head out between pains. Care should be taken, too, to prevent the after-coming shoulders from doing damage, by giving the necessary support and preventing a rush. And as to rupturing the membranes, I think it should always be left to nature in first labors, and I am of the opinion that it were better to let nature perform it in all labors.

As to the third stage of labor, I do not think we are warranted in exercising the slightest haste in delivering the placenta, unless there is an urgent demand for emptying the uterus, on account of threatened hemorrhage. A little exercise of patience and Crede's manipulation will usually be rewarded, and the patient will be left in much better condition than if force had been used.

I once heard an old and experienced physician make the statement, in a medical society meeting, that he had never had a ruptured perineum, and that his opinion was that "the perineum would stretch a yard before it would tear an inch." I took his assertion then "cum grano salis," and after a few experiences of my own, not very pleasant to remember, I am strongly inclined to the opinion that he was "stretching the blanket;" else the perineums he had had to deal with were different from any I have ever run across, and were wonderfully endowed with elasticity.

My opinion is that the man who does much obstetric work and never reports any ruptured perineums, either never examines his patients for tears after delivery, or else he feels incompetent to make repairs, and refuses to acknowledge his mishaps in that direction. I make it a rule to examine carefully for lacerations after every delivery I make for, be as careful as we may, we may still meet with bad luck, and if I find I have met with a rupture, I am frank to admit it, and if allowed to do so, proceed to mend it to the best of my ability as soon as the swelling is out of the parts. I am not one who believes that the majority of immediate repair operations fail in good results; but I believe we should wait about forty-eight hours before operating, to allow the oedema of the parts to subside, in order to prevent separation after the sutures are made.

After confinement, I think the patient should be kept in bed at least two weeks, and

for the first few days should have, every few hours, a fresh napkin, that has been boiled, applied after an antiseptic sponging. After the first few days it is not necessary to do this so often.

The greatest trouble we have, and the cause of most of the woe that comes to us in the management of cases after confinement, is the officious old "Granny" who infests every neighborhood, and who always knows more about such matters than the doctor in charge. She never fails to want to "dip in her oar," and we have to watch her with our best eye if we do not want to get "into the middle of a bad fix." We do not run across her in every case, of course, and happy should we feel when we do not. I sincerely wish that her type could become extinct.

If, after using every precaution we can in the management of a case, infection occurs, our condition is a deplorable one, and we should leave nothing undone in making a fight against it.

As I stated in the outset, I have not presumed to take up to any extent the management of women during the period of uterogestation, or to enter minutely into the subject of managing labor in its different phases, but have only attempted to bring out a few points, which I trust will elicit discussion.

TUBERCULAR MENINGITIS.*

By GEORGE P. SPRAGUE, M. D., Lexington, Ky.

Acute hydrocephalus, basilar meningitis, and acute tubercular lepto-meningitis are different names for a single disease consisting of a deposit of tubercles and of an inflammation caused by them in the membranes of the brain, or in the brain and spinal cord. It is almost always secondary to tuberculosis elsewhere; it occurs in not less than fifty per cent. of all cases of miliary tuberculosis and causes, in cities, one death in every twenty-five to fifty deaths from all causes, there being a great difference in its occurrence in different years. It occurs most often in children between the ages of two and ten years, and when it occurs in adults, at between the ages of twenty-five and forty years, although no age is exempt. Males are more prone to it than females, and the children of tuberculous parents and children who are poorly fed and housed are most subject to it. Injuries to the head are predisposing causes, as is also winter, the season of poorest sanitation.

In tubercular meningitis the inflammation occurs in the pia arachnoid and it is the lesions in its meshes, or beneath them, that characterizes the disease, and to which all other

* Read before the Kentucky Midland Medical Society at Shelbyville, Ky., January 12, 1905.

lesions are secondary. Although called basilar meningitis the lesions may extend from the base to other parts, may occur on the lateral surfaces almost wholly, or may involve the vertex, and as the extent of the surface involved and the number and location of tubercles vary, so will the symptoms vary, be complicated or be very obscure. As a rule the pathological appearances of the lateral and superior parts of the meninges are not very marked, except along the main cerebral vessels where the pia may be opaque, or even thickened, but at the base in the words of Church, "the morbid picture is comparatively uniform and striking. At the circle of Willis, extending along the basilar furrows, between the peduncles and the sylvian fissures, is a thick, almost gummy exudate, dotted with small masses of a dirty whitish color. These are tubercles in various stages of development and degeneration." The pia mater may be studded with them; they are granules of a grayish color, varying in size from a microscopic point to that of a small pea. These tubercles may be so few as to escape any but the most careful search, or they may be present, like rally, by thousands. They are always found along the blood vessels.

Inflammation of the pia may or may not be marked, according to circumstances. When effusion has caused much pressure the surface of the pia may be dry and not congested, but a moderate hyperaemia is frequently present, especially at the base where the vessels are less liable to be subjected to pressure.

The exudation is most profuse where the tubercles are in largest numbers and may be thin, clear, gelatinous, turbid, gray, yellowish, or green. It follows the course of the vessels, fills the fissures, and enters the ventricles. The increase of the exudate and invasion of the ventricles occur in nearly every case and give rise to the name of acute hydrocephalus.

Tubercular meningitis has a stage of weeks of premonitory symptoms so insidious in their onset that they may only be noted in the average case in retrospect after the active symptoms have made their appearance. The most constant forerunner of the disease is a gradual loss of flesh without noticeable cause, more marked in body and limbs than in the face. There is soon loss of appetite, the bowels are apt to be constipated and the weariness of the patient is extreme. The child loses interest in his play, wants to be alone and becomes irritable, complaining of headache and having unreasonable likes and dislikes. At this time it will usually be found that there is an evening elevation of temperature to 100 degrees or more, although the temperature may be normal during the day.

As this disease begins the active stage, the premonitory symptoms become more pronounced. Some cases are ushered in with violent headache, often referred to some special part of the brain, and frequent projectile vomiting without much rise of temperature, while others begin with a chill accompanied by a rapid rise of temperature. The symptoms now become more constant; the patient is less active, often lying with his eyes shut and objecting irritably to attempts to arouse him. There is acceleration and irregularity of the pulse, altered respiratory rhythm, retraction of the abdomen and dilatation of the pupils owing to the situation of the disease at the cerebral base, paralysis of some nerve of special sense is apt to occur early,—thus a double ptosis, with dimming of sight may be thought to be only a part of the drowsiness or stupor which, beginning early, gradually deepens into coma. This stupor is often marked by short sharp cries of peculiar character—the hydrocephalic cry. The head may be retracted, the muscles of the neck stiffened, while slight opisthotonos is common. Apart from the stupor there is confusion, with often some delirium.

Temporary or permanent paralysis of any of the cerebral nerves should be carefully watched for, both for their value as to treatment and in diagnosis.

Convulsions are entirely absent in but few cases, although they may occur either early or late. Rapid emaciation follows the progress of the disease. The contents of the bowel and bladder may be obstinately retained or the sphincters may act automatically without the knowledge of the patient. After all these symptoms, more often only a few of the principal ones have persisted for several days or a week, there is a distinct remission which may appear to be steadily approaching a recovery when the symptoms again return with all their original severity. These remissions may recur more than once, only to end ultimately in a return of the symptoms and death.

From what has been said, it is clear that the diagnosis must be most difficult. Indeed, it is an impossibility to make more than a tentative diagnosis in many cases. In the prodromal stage the symptoms are so mild and so variable as to make a diagnosis improbable. If the headache, vomiting and constipation should co-exist in a case with tuberculous heredity, without other diagnostic symptoms; a diagnosis of tubercular meningitis would be justifiable. In one of my cases the phthisis of the nursing mother caused me to make a provisional diagnosis, which was afterwards confirmed. Lumbar puncture should always be done, both for purpose of diagnosis and for treatment. Five to fifty cubic centimetres of

the cerebro-spinal fluid should be removed under the most careful precautions to prevent contamination of it, and examined for tubercle bacilli, pus, etc. The bacillus is present in the cerebro-spinal fluid in about eighty per cent. of tubercular cases. Anders recommends the use of tuberculin as a diagnostic aid. Of course the rare occurrence of miliary tubercle in the choroid should not be overlooked. The irregularity of, and dissociation between the temperature, pulse, and respiration is undoubtedly of special significance. The temperature may be sub-normal, with a pulse of 130 and the respiration may be much accelerated, with the pulse at 100.

According to Hay it is necessary to distinguish tubercular meningitis from the other forms of meningitis, from encephalitis, from the meningeal symptoms of the continued fevers, acute rheumatism, pneumonia, tetanus, cerebral tumor and abscess, uraemia and hysteria. From the other forms of meningitis it can best be told in the absence of the tubercle bacilli by its prodromal stage—its lower fever and by its slower and less regular symptoms.

Hysteria can be differentiated by a careful analysis of its symptoms. J. B. Herrick says that Kering's sign is present in from eighty to ninety per cent. of cases of meningitis, and only exceptionally in other diseases. As pointed out I think by J. Lewis Smith, more than twenty years ago, a wrong diagnosis may even be made at autopsy by mistaking the small whitish or yellowish granular masses that may sometimes be found in the membranes in non-tubercular meningitis for tubercles.

The prognosis in tubercular meningitis is wholly bad, although a few cases of recovery are reported by reliable men. The treatment is largely symptomatic. Every means to combat loss of strength and weight should be used vigorously from the start. The bowels should be moved regularly and the catheter used when necessary. Iodide of potash should be given faithfully with strontium or sodium bromide. The room should be quiet, cool and dark. Reports on lumbar puncture, tuberculin and trephining are contradictory, but they should be resorted to whenever possible. The Germans have faith in iodoform inunctions to the shaven scalp. These may be used.

HYDROPHOBIA.*

By A. S. BRADY, M. D., Greenup, Ky.

The word, "hydrophobia" is of Greek origin and when translated into English means, as you well know, "dread of water." Hydro-

phobia is an acute, infectious disease which occurs most frequently in the lower animals, especially the canine species. The disease is transmitted from those infected to other animals and frequently to man through the medium of an open wound and the secretions from the salivary glands. It is never transmitted by partaking of food from animals that have been the victims of hydrophobia, or, in other words, through food taken into the stomach. The infection always occurs through a break in the skin or mucous membranes, the wounds being inoculated by the saliva.

The main characteristics of the disease are similar in animals and men. The most peculiar and marked symptom is a dread of water: hence the name. The disease is known to have existed for centuries and is frequently mentioned in the writings of Virgil, Horace, Aristotle Xenophon, and many of the early medical writers. Celsus gives minute description of the symptoms and treatment of those bitten by rabid animals, and also sets forth in strongest language the dangers that might arise from such wounds. In later days such men as Hunter, Virchow, Fleming, Pasteur and also Nigri (who wrote a very valuable paper on the early diagnosis of the disease printed in the journal of the American Medical Association, October 29th, 1894), have given us some very valuable information on this disease. That the disease is transmitted through an open wound by direct contact with the secretions of the salivary glands is beyond question.

That the infection is due to a specific germ is also an undisputed fact. The germ, however, has not yet been isolated, unless in the past few weeks. The Pasteur Institute of Paris has recently given out the information that they have found the germ and describe it. Ninety per cent of all cases of hydrophobia in man are transmitted by the bite of dogs, the remaining ten per cent. by rabid cats, wolves, foxes, and human beings.

It must be observed that all persons bitten by rabid animals will not develop hydrophobia. There are numerous reasons for this fact. A person may be bitten by a rabid animal through the clothing and the clothing prevent the saliva from coming in contact with the wound, thus obviating an inoculation.

It has been determined that the location of the wound has much to do with the development of the disease. The nearer the wound to the high centers of the nervous system, the more certain the inoculation and the shorter the period of incubation. It becomes a matter of very great importance to the physician to recognize the symptoms of the disease in the lower animals, especially the dog, as it fre-

*Read at the Sixteenth Quarterly Meeting of the Tri-State Medical Society, Catlettsburg, Ky., January 19, 1905.

quently becomes his duty to pass judgment upon the question whether or not the animal is suffering from hydrophobia. One of the first symptoms noticed in the dog is a surly morose disposition in a dog formerly kind and obedient to his master. He will frequently refuse tempting food; when thrown before him he will turn and walk away. He then will abandon abode and master, and develops a tendency to bite without provocation. This is early in the course of the disease, from the first to third day. It will frequently be noticed that a dog afflicted with hydrophobia in the early stages takes a course from home in a direct line, frequently following the highway or path through a field. He neither deviates to the right nor left, from the direct course. The head is leeward, with a characteristic wabbling gait, the saliva dribbling from the mouth. The eyes have a vacant stare. He has a marked tendency to attack man or animal that comes in his course. If wounded he does not exhibit any feeling of pain; in fact, seems to be insensible to pain. It is a mistaken idea that a mad dog does not drink water. This is true of human beings only. A dog affected with hydrophobia will drink, or attempt to drink, water but the effort is sure to bring on a spasmodic seizure.

The period of incubation of the disease varies to a remarkable degree. The shortest time known for the development is fourteen days. The average time is about six weeks. There are some few notable cases where the disease was said to have developed after a period of incubation of thirty years. But this is certainly an exaggeration. If a person be bitten by a rabid dog or other animal and does not develop the disease within twelve to fourteen weeks, he is comparatively safe.

When the disease is about to develop itself, it not infrequently happens that the wound, which quickly closes and may be entirely healed, begins to exhibit evidences of inflammation, with a tingling and itching accompanied by great mental depression and restlessness, and a kind of indefinite fear. There is an unusual tendency to talk. The articulation is quick, distinct and rapid. Patients, having knowledge of having been bitten by a rabid animal, will deny it with great obstinacy. There is feverishness, loss of appetite, sleeplessness, severe frontal headache, intense nervous excitability and a peculiar sobbing and sighing in attempts at respiration, and a noticeable aversion to liquids. These symptoms constitute what is termed the melancholic stage, which lasts perhaps two days. Then a stage of excitement comes on with all the characteristic phenomena of the malady. The sufferings of the patient become more increased; the countenance shows anxiety and ter-

ror; the dysphagia becomes more noticeable. The most terrible features of this stage are the effects produced by attempts to swallow fluids. The patient suffers from intense thirst and calls for water incessantly, but in making the attempt to drink he is seized with a violent suffocating paroxysm of the muscles of the throat and chest. This condition continues for several seconds and is succeeded by a feeling of intense alarm and distress. This condition continues from bad to worse until the very thought of taking liquids brings on these terrible symptoms. Late in the disease a bright light, a slight noise, or draft of cool air brings on the seizures. The paroxysms increase in severity and frequency. The intervals become shorter but there is comparative quiet in the interval. In many instances there is great mental depression, with maniacal excitement, in which the patient strikes at every one about him and makes attempts to bite. During the interval he is conscious of his attempts to harm his friends and advises them to be careful and keep out of the way. The last stages last from two to three days; the suffering is terrible beyond description. The patient succumbs and death takes place in a paroxysm of choking, or on the other hand, from exhaustion. The symptoms having abated, the power of swallowing having returned, the patient dies in coma. The duration of the disease from the first to the end varies from three to five days.

In the matter of treatment we have nothing to offer. After the disease has manifested itself it always proves fatal. The treatment for persons bitten by a rabid dog must take place before the development of the disease. One of the very first things to do is to apply pure lemon juice to the wound. It is claimed by investigators that this will destroy the germ. This was highly recommended by Pasteur and by the different institutions in this country that use the Pasteur treatment for the prevention of the development of hydrophobia. It is well to cauterize the wound after the application of the lemon juice. I take it that a patient bitten by an animal supposed to be rabid should be at once taken to one of the Pasteur Institutes for the treatment for the prevention of the disease. The treatment consists of hypodermatic injections of the virus made by the exsiccation of the medulla of rabbits, which have been inoculated with the disease. This treatment is graded in different strengths, beginning with a weak virus and increasing daily to about the sixth day when there is a decrease in the strength, the treatment covering a period of from fourteen to twenty-one days.

Wounds of the head or face are considered

more dangerous and the treatment covers a period of twenty-one days. Wounds of the trunk are less dangerous, the treatment covering a period of eighteen days. Wounds of the hands and feet are the least dangerous, the treatment covering a period of fourteen days.

The records of these institutes show that less than two per cent of persons bitten by rabid animals develop the disease after treatment. While, before the treatment was instituted, fully sixty per cent developed the disease.

I will simply mention the so-called "mad-stone" to condemn it. It is unscientific and can do nothing more than act as a counter-irritant. You all well know that the poison is carried to all parts of the system soon after the infliction of the wound and local applications such as these mad stones are of no avail.

I have with me and now present to the members of the Association a specimen of the mad stone which has been used a great number of times to my knowledge, and three different cases upon which it was used developed hydrophobia. The stone has been in my possession for a number of years and was a noted stone in the western part of Jackson county, Ohio, and was said to have sold at public auction for \$450.00. It is probably worth the fractional part of one penny.

EXPERIENCE OF A DOCTOR IN THE KENTUCKY MOUNTAINS.*

By W. G. BAILEY, M. D., Millersburg, Ky.

Mr. President and Gentlemen of the Bourbon County Medical Society:

My being a native of the Kentucky mountains and having practiced medicine there fifteen years are the reasons, I suppose, that the committee on program selected the title of my paper, "Experience of a Doctor in the Kentucky Mountains." I write from memory alone and speak of the ridiculous side of my experience when I refer to any case. I give only a rough outline of treatment in any given case, but report occurrences as they actually were. I refer to some that will no doubt sound rather ridiculous but the facts I speak of are sure enough facts. The experiences referred to occurred among the more ignorant class, or Creekers, as we call them in the mountains. They have no idea of the outside world, and to talk sepsis or sanitation to them would be as hard for them to understand as Greek or Latin. I therefore offer no apology for my paper, but feel rather proud

of a chance to speak of some of my experiences to you. It will be impossible for me to stick to the role of a practitioner of medicine alone, for during my fifteen years of service in the mountains I was physician, optician, obstetrician, gynecologist, in fact a specialist in every particular.

Imagine, if you can, a case of typhoid fever twenty miles out in the country, during July, August or September, when the thermometer stands at a hundred degrees in the shade, the patient being in a room not more than sixteen feet square, where they cook, eat and sleep. Such a thing as ice water, or a lump of ice, would be as easily found as a lump of gold. In such a case it may be only one sick in the house, but I have had from three to seven in a room no larger than above referred to, and they would all get well in the majority of cases. I would treat them with about as much talk as medicine, showing them the necessity of cleanliness, and during the summer months have them remove the stove and eating apparatus to the yard. Medicinally I would give salol, sulpho-carb. zinc and, when a continued high temperature, acetanilid, as they would not do much bathing, fearing they would give the patient a cold. Turpentine came in for tympanites, dry tongue, etc.; digitalis and strychnine for heart, opium, ergot, tannin, lead, etc., for hemorrhage. The diet was milk and chicken broth. The majority of my competitors gave from start to finish (and just here let me say the finish soon came) calomel, quinine, and compound cathartic pills, establishing a diarrhoea that bismuth, sulpho carbolate of zinc, catechu, kino, tannin, opium nor anything else would stop until after they were buried. This far I followed some of them, and have always regretted I did not have them exhumed, after they had been buried a week, to see if they were still purging. The water these unfortunates drank was impure and almost as hot as the atmosphere; to it I would add a lemon and they drank it freely, saying, "Doc, that is so good."

During an epidemic of dysentery I have seen from fifteen to forty cases a day, in wretched hovels like the one referred to. off your feet, for frequently there would be three or four using the vessel at a time. The You may think I am exaggerating when I say I have seen as many as forty cases a day, but when I tell you I have ridden up a creek a mile and a half long and found this number of cases in from four to eight families, you can see there is truth in the statement. On entering the house the odor would most knock you comode in the majority of cases would be an old bread tray, tin pan, stove skillet or some other device filled about half full of

*Read before the Bourbon County Medical Society, February 11, 1905.

wood ashes. As soon as the patient would get back in bed, this receptacle would be shoved to one side, they leeming it useless to empty it, as the patient would need it again in twenty or thirty minutes. I would use deod. tinct. of opium freely, so as to have them sleep at least half the time, bismuth subnitrate, with an occasional saline and when possible an enema of starch water and tr. opium. I would have but few deaths, in fact in my bailiwick they called me the flux doctor. Sanitation in these places was almost not to be thought of, for there was but little water, compared with the amount of dirt and other filthy matter. But some hot water and a quantity of lime scattered around the house, under the floor and in the house, would remedy matters wonderfully.

I think as I write this of an epidemic of measles in March, 1888, and the varied experiences I had during this epidemic. About one a. m. one cold frosty night, I was called to a family where eleven members had been exposed at the same time. Each of them was about reaching the eruptive stage when I made my visit. The father, an old backwoodsman, was the nurse; he had them all in three beds in one room, sleeping on a big bed and covered over with another feather bed weighing thirty-five or forty pounds, besides many heavy woolen blankets and covers. When I would raise the cover and turn the beds back off of them, the steam would rise from them like it does from the escape pipe on an engine. He had kept them warm, he said, to prevent their taking cold and had given them hot teas of various kinds, mostly sheep tea, brimstone (he meant sulphur,) etc. I would take off the feather bed they were covered with, put on a few blankets and give them (this you must remember was March) ice water ad libitum and by daylight they were all broken out well. When the cough was harrassing an occasional Dover's powder would relieve this. For the sore throat a gargle of hot salty water would suffice, and the diarrhoea a few doses of deod. tinct. of opium and bismuth would usually relieve.

On my way home next morning I met a man riding horse back, with his left arm in a sling. He said he had been to town to see me and was "powerful" glad to meet me. I asked him what the trouble was; he replied that Doctor Jones said he had pneumonia. I inquired after his symptoms and he said that he didn't have a "dratted pain only in the end of his left fore finger." I told him to dismount and I would look after the trouble. I found he had what we call in the mountains an old-fashioned bone felon. My bistoury being in my pistol pocket was readily brought into position. My pneumonia pa-

tient of Doctor Jones being astride a huge log, I made a free incision, dusted on some iodoform and sent him on his way home with a note to Doctor Jones telling him I always treated pneumonia of the finger with a free incision, followed by a hot flax-seed poultice.

We treat pneumonia, however, differently up there. If the patient is a robust individual we give him half a grain of calomel, with 1-5 or 1-10 grains ipecac every hour for eight or ten hours, followed in four hours by a good dose of sulphate magnesia; in some cases, after this has acted, quinine, Dover's powder, etc. For the fever, if one hundred and four or one hundred and five degrees, if they won't sponge, then three to five grains acetanilid every four hours. Digitalis and strychnine we rely on mostly for heart stimulants, but occasionally an old toper would require about a quart of our celebrated "mountain dew" to pull him through. When required to relieve the pain a hypodermic of morphine and atropine would be injected. Sometimes where resolution was slow to set up, we would apply a fly blister over the inflamed area.

I want to speak of a case of empyema I treated while I was in the mountains. After an eighteen mile ride one dark November night I found myself sitting by the fireside of an old gray headed man, who still wore his home made jeans and flax and tow shirts, watching by the bedside of a young man eighteen years of age. I commenced interrogating the old gentleman about the illness of his boy. He said the boy had been sick of "pneumony for four weeks and ain't got any better." Upon examination I found the whole left side full of an effusion, the heart being pushed almost under the right axilla. From the present indications and the history, I inferred he had had pleurisy with an effusion, which had become a true empyema. I brought my aspirator into use and withdrew a gallon of pus, which greatly relieved my patient and caused the old man to drop a twenty dollar gold piece in my pocket, when I went to leave for home, and that made the mud holes look brighter and the mountains look like ant hills as I rode home that day. To follow up the treatment of this case would tax the patience of the society too much, but I will add the old man slipped more of the shining metal into my pocket after I resected a rib and established free drainage in the boy's side.

I gained some notoriety for stopping blood almost by accident one day. The jailer was having a fearful hemorrhage of the lungs one cold rainy day in March, 1885, and the man in town who stopped blood by a charm had given up in despair. As I rode by

the jail, some one saw me and begged me to come. The man was bleeding to death. As I entered the door such a sight I had never beheld, nor since have I seen anything equal to it. The poor fellow was lying on the floor, the blood gushing from his mouth in torrents, it seemed to me. I asked no questions but went to giving hypodermics of fluid ext. of ergot and in a few minutes my man was able to speak. His first words were, "God bless you." I admonished him to keep quiet and all would be well again. My conjurer friend at this point sidled around and slipped out and would never try to stop blood in my presence again.

About six months after this I delivered a woman (who happened to be present at this man's house during the attack) of a bouncing boy that had a birth mark of scarlet over the left side of the face, that was the result of her seeing the man bleed, so she and all the neighbors said. My arguments to the contrary proved fruitless and caused me to wonder, in the case of a three or four legged chicken, which it was that marked it, the hen that layed the egg or the hen that sat on it. May be some member of the society can tell me.

About daylight one morning in June, 1888, I was called twenty miles in the country to see a little girl ten years old. The messenger was the child's grandfather who stated, "her got sumtin de mater wid her right side." On my arrival about noon I found the child had an abscess of the liver. It looked like there was a keg or something of the kind on the inside trying to bulge out and the skin looked like a frozen pumpkin. I prepared the side for an incision and as I made the opening the pus was thrown almost to the ceiling. The child squalled frantically and an old maid aunt of the little sufferer took me *kerbill* over the face and eyes with her fist and I found myself sprawling on the floor. I got on my feet in a dazed condition scalpel in hand, and told her if she moved I would cut her throat. Things quieted down pretty soon and after a dinner of chicken and dumplings, I pocketed a ten dollar bill and retreated. In the fall of 1898 I delivered this some little girl of a bouncing ten pound boy.

In July, 1893, Doctor Glass and I, accompanied by two young medical students, went to the country to enucleate an eye for an ex-soldier. After a dinner of beans and onions we placed our patient on the table on a side veranda. I was administering chloroform and when the patient reached the exciting stage of anesthesia he commenced singing "one-eyed Riley, big footed nigger, etc.," alternating with a few yells like a Comanche Indian. I was interested in the patient only.

but suddenly quite a commotion took place behind me and I found my two young friends tussling with a big barefooted girl, axe in hand, trying to reach me. Some of her folks helped the boys and as she retreated I heard her yell, "I'll kill them all; they are a pack of damned Egypts." From this operation we were enriched by a yoke of oxen and a muley cow.

One day in November I was called twenty miles away to see a lady who had a retained placenta. On my arrival I found the attending physician occupying the only chair the house boasted of. On asking him after the condition of his patient, he replied he had delivered her sixty hours ago of a good sized child but the placenta was retained and he could not deliver her and had sent for me to give chloroform for him so he could. I made preparations for an examination and when I went to make a digital examination I found the cord seemed to be attached at both ends. On following the outer end down the thigh of the patient I found the cord tied tight around the thigh. Asking the doctor what this was for he said he had done it to keep the afterbirth from going any further back. I introduced my finger into the vagina and found the placenta lying at the vulva and a little traction on the cord with a little pressure externally brought it away easily. The discharge, about a gallon I should think, smelled worse than any dead house I ever entered. This poor unfortunate woman died in a few days from septic poison, due to the ignorance of the M. D., that attended her.

Is it any wonder, Mr. President, that so many of our physicians are urging an examining board for Kentucky? There are all kinds of "isms" in the mountains in obstetrics and the greatest wonder to me is how most of the women live at all after delivery. Among the ignorant they do not change the bed or clothing for nine days after delivery.

Now, if you please, watch a case delivered on an old dirty bed, the patient having on the old dirty woolen skirt she had worn for months, nothing being removed after labor has terminated save the clots and secundines the midwife can scrape up. Strange to say a goodly number recover without any bad symptoms. Most of these cases, however, are delivered with the women sitting on a chair or astride her husband's knees, but in these cases there is no change of clothing or bath for nine days. I knew personally more than one case where the woman would be delivered, say twelve o'clock, midnight, and would get up and get breakfast next morning for the family. I often wondered at this, how it was that nature should behave so well, never understanding until speaking of the

matter to an old mountaineer one day, and he said "they weer of the cow kind and I need not have any uneasiness in such cases."

I was called in consultation with two old M. D's one day in a case of labor and found they had a foot presentation and after hours of waiting for the head to follow, one of them who always used his barlow knife for all operative measures, had cut the child's head off and left it undelivered. Imagine my surprise and the situation I was in when I found these facts. I at once diagnosed a remaining hydrocephalic head, administered chloroform, applied forceps, held the head steady, punctured the mass and, after it seemed to me a barrel of water had escaped, the hydrocephalic head was delivered. The parietal bones measured nine and a quarter inches, longest diameter.

Some months after this I was called in a case with one of these old men, where the child, all but the head, had been delivered for eighteen hours. I again made a diagnosis of hydrocephalus, punctured the cranium and the head followed rapidly. The doctor remarked to me that trick I carried (Thomsoms perforator) was a nice thing and if I had a few more chances to use it I would soon do pretty well.

A young lawyer consulted me in regard to a case of piles one afternoon; I went to his room and found him suffering with an aggravated case of external hemorrhoids. I washed and prepared him for an operation and after thoroughly cocainizing the tumors applied the clamp and operated in the usual way, applied bandage and antiseptic dressing, and returned to my office expecting to call by and see him at nine or ten that evening. I had hardly reached my office until I had a call twenty-five miles to another county, where I expected to pocket a twenty-five dollar fee. So keen was I to get hold of this fee that my lawyer patient escaped my mind, until I was well on my way to the other county. I consoled myself by saying he could get no one else sooner than I could return and while thus soliloquizing I heard the rapid approach of a horse behind me and imagine my surprise to be overtaken by a messenger from this lawyer saying he was rapidly bleeding to death and suffering intense pain. I was within a few miles of my twenty-five dollars and to retrace my steps now seemed preposterous. I gave the messenger a few tablets of morphine and atropine to give for the pain, a prescription for Monsell solution, instructing him to first apply ice and if this failed to stop the bleeding to apply the medicine. I went on my way returning about ten A. M. next day to find my lawyer friend sitting on the bed-side eating a bowl of soup and in the

best of humor with me. I elicited the fact from him that there had never been any serious trouble, but his mother discovered the bowl of bloody water I had failed to throw out and had dispatched the messenger. I removed the dressing next day, used an enema and if the lawyer has ever had any more hemorrhoids I have never heard of it, and if he has ever paid me for the operation I can't remember it.

On as cold a December day as you usually see, I was sent for from an adjoining county with Doctor Glass to see a man a tree had fallen on. I found him after a six hours' ride over icy roads, with his left leg entirely mashed to a pulp. This was thirty-six hours after receiving the injury. The limb, or rather mass, was perfectly black and two quacks were in the room applying various nasty nostrums to keep down inflammation. He was delirious, pulseless and gasping for breath. While warming fingers and toes I was interested in the bystanders and also in the poor sufferer and as I write this I think of a "ditty" (as we call it in the mountains) he tried to sing. It ran something like this, "Who's got my French harp, I don't know, give me your's, mine won't blow." Nothing would do my two quack friends but I must amputate, so we put the dying boy on a kitchen table, gave chloroform and amputated at the hip. We congratulated ourselves on getting him off the table alive, but in an hour or two his spirit had passed from earthly things and I hope is now in a far better and brighter world. I received for this trip a cup of black coffee and a frost-bitten heel, and my old gray horse a good big sore on his back.

About as amusing an occurrence as I can think of happened in my office one day. A man came in on crutches; he had an injury of some kind to the calf of one of his legs. His limb, so far as the injury was concerned, had gotten entirely well, but had left the leg flexed at an angle of forty or sixty degrees, so that he could not tip the toe of this foot to the floor. The muscles and tendons in the leg of course were contracted and when I would put them on a stretch he would yell and swear I was murdering him. I was in a dilemma, so set my wits to work. I placed his heel in a chair in front of him, and purposely fell over one of his crutches, my full weight coming down on the limb, straightening it to its former shape. My man fell on the floor and yelled in good fashion and as I commenced to get up he swore he would break a crutch over my head. He looked like he meant it, so I opened the door, walked out, locking it after me, feeling he would relent when he found he could walk without

his crutch. He soon called me to the door and said "as he had found out he could walk without his sticks, he would go, but he would be damned if he would pay me a cent for straightening his leg," and he never did.

A little short legged Irishman came in my office one day and asked me to extract a tooth and insisted I should give him chloroform, so he would not feel it when I pulled the tooth. I consented reluctantly and thinking I had him far enough anesthetized to extract it, I applied the forceps, when much to my surprise he sprang up from the table, went for his pistol pocket and before I knew what had happened, he drew his gun, walked out on the street yelling he was drunk and a bad man, flourishing his revolver and making pedestrians hide out, as he termed it. With the aid of a friend he was caught, re-conducted to my office, and when we went to extract the tooth next time our Irishman lay perfectly calm.

PROGRESS IN DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Under charge of ADOLPH O. PFINGST, M. D., Louisville, Ky.

THE NECESSITY FOR THE OBLIGATORY TEACHING OF OTOTOLOGY IN THE MEDICAL SCHOOLS.

The *Annals of Otolaryngology and Rhinology* of Dec. 1904, published an address by Prof. A. Politzer, of Vienna, delivered before the International Congress of Otolaryngology, at Bordeaux, August, 1904, in which he makes a plea for placing otology upon the official list of studies of all medical colleges. He points out the wrong done society by the absence of otologic instruction from the program of official studies and the absolute necessity of a knowledge of otology by every physician. Practice has shown that defects of hearing caused by catarrhal processes in the middle ear may be avoided by treatment instituted at the proper time—treatment not requiring the intervention of a specialist. A more grave cause of defective hearing is neglect of the so frequent suppurations of the middle ear which may terminate in ulceration, caries and necrosis of the temporal bone and complications, the results of which may be fatal.

Otology should be assigned a privileged place, compared with certain obligatory branches which in most cases deal only with functional manifestations while many ear diseases jeopardise the life of the patient. Fifty years ago there was no thought of otology in the universities.

At the beginning the subject was assigned

assistants in the faculty. The first otological clinic established in the world was installed in Vienna in 1873. Although this was the impulse for the establishment of many other ear clinics the subject has obtained a precarious footing in the universities.

Even where well-organized otologic clinics exist the students have derived little benefit from them. Politzer attributes this to the ignorance of pupils as to the practical benefits to be derived, and believes that most of them only perceive the lacunae in their otologic knowledge after they have settled in practice. While the student who designs to do general work ought not to be loaded with minute details which are indispensable to the specialist, we have a right to demand that every physician be able to diagnosticate the simple forms of aural affections which he meets in practice.

Poltitzer concludes by expressing the belief that the duty of every State consists not only in founding in each medical school a chair with a regular otologic clinic but also in including otology in the required examinations, in order to put this specialty in the hands of every physician.

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THE NECESSITY FOR OBLIGATORY INSTRUCTION IN OTOTOLOGY IN THE UNIVERSITIES.

Prof. G. Grandenigro's address before the International Congress of Otolaryngology at Bordeaux, August, 1904, published in the *Annals of Otolaryngology and Rhinology*, Dec. 1904, deals with the inefficiency of otologic instructions in our universities. The fact is pointed out that the student is unable to select subjects which will be useful from a professional standpoint and he naturally devotes all of his time and energy to those which are classed as indispensable. So most young doctors on leaving the universities possess only the most elementary ideas on otology. The wonderful progress of this specialty and the frequency and gravity of aural affection makes the contradiction between university instruction and the demands of practice inexplicable and flagrant. This has its cause in the recent date at which otology has asserted itself as a specialty and the lack of therapeutic results obtained by aurists who frequently did not see the patient until the disease was far advanced and surgery was consequently less successful. The otologic clinics have lacked material, laboratories and other facilities as compared to certain other specialties that are far less important to young physicians than otology. It is possible to see daily the disastrous consequences of the resulting ignorance as shown in cases of deaf-mutism, incurable deafness and even death, which should have been prevented.

The doctor, ignorant of otology in the presence of the patient consulting him for an aural affection, has the choice between modestly admitting to him his incompetence and sending him to a specialist, or of undertaking some treatment whose indications and results he cannot appreciate. The elective study of otology in many universities and the consequent secondary rank occupied by otologic clinics as opposed to those of obligatory specialties, has plainly affected the dignity of otology. In asking that instruction in otology be made compulsory Gradenigro means only the instruction in what the students will require in their practice.

At the close of his remarks he moved the appointment of an international commission for the purpose of studying and putting into execution the most opportune means of obtaining compulsory otologic instruction in all medical schools.

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A TROPICAL DISEASE OF THE EARS.

Dr. Richard Mueller, of Berlin, reported in the *Zeitschrift fuer Ohrenheilkunde*, November, 1904, twelve cases of an affection of the ear canal which he believes to be peculiar to the tropical region. The disease which was observed in parents between the ages of 23 and 45, came on insidiously without pain and was characterized by a boggy swelling of the auditory canal. After the appearance of the swelling most of the patients began to complain of pain, which continued for a varying period of several hours to several weeks. After the acute stage, a long period followed in which lasting pathological changes took place. In every one of the cases exostosis of the external auditory canal, or marked hyperostosis developed.

They attained only enough size to encroach on one-third to one-half of the lumen of the canal and were found in every wall except the upper. The skin over the bony growth was always more or less swollen and red. Every one of the patients affected with this disease complained of subjective noises and of defective hearing. The latter varied considerably, the voice being recognized in one instance only when spoken close to the ears. Other otologists have observed similar changes in the ear canals occurring in the tropics and the disease can be looked upon as one occurring only in the tropical regions.

With the return of the patients to other climatic surroundings a gradual improvement was noticed, and after a period varying from several months to several years the subjective noises disappeared and normal functions were restored.

SOME POINTS RESPECTING THE SURGICAL ANATOMY OF THE FACIAL NERVE.

H. A. Alderton, M. D., in the *Archives of Otology*, Dec. 1904, discusses the anatomy of that part of the facial nerve lying between its entrance into the internal auditory meatus and its exit through the stylo-mastoid foramen. He boiled a number of temporal bones until the soft tissues were disintegrated and after drying, injected the facial canal through the stylo-mastoid foramen with a boiling solution of carmine in beeswax. Two approximately horizontal sections were then made with the saw, one on a level with the supra-meatal spine and the other with the floor of the osseous ear canal. In the majority of cases a condensation of bony tissue existed around the facial canal, almost compact in character, and but few showed simply a denser cancellous structure than in the cellular parts of the mastoid. In eighteen specimens but seven marked and two questionable dehiscences were discovered in the portion of the nerves bordering on the cavities of the middle ear, and all of these were in the neighborhood of the fenestra ovalis. No dehiscences were discovered in the bony wall between the facial canal and the labyrinthine cavities.

The author also investigated the distance existing between the facial canal and the supra-meatal spine, with resulting average of 15.9 m. m. The minimum was 14.2 m. m. and the maximum 20 m. m. The distance between the facial canal and the posterior inferior angle of the external osseous meatus was also measured and an average distance of 12.1 m. m. found.

These anatomical findings would seem to warrant a brave attack upon the bone along the level of the spine up to the depth of 11 m. m. and also on a level with the outer orifice of the external auditory canal up to a depth of 7.5 m. m. Beyond these distances extraordinary care must be exercised. The facial canal in its vertical portion was found to be about 3.5 m. m. from the nearest point of the posterior edge of the aurculus tympanicus and that the average distance between the tympanic cavity and the nearest portion of the descending arm of the facial canal was only 1.4 m. m. These two regions, the posterior edge of the annulus tympanicus and the posterior tympanic wall are frequently involved in carious processes.

Alderton noticed that the wax injection failed to make its escape from the aqueduct of Fallopius into the internal auditory canal, notwithstanding that it did escape from the hiatus Fallopii into the middle cerebral fossa in some of the specimens. This fact would

indicate that mechanically the track of any infection passing from the mastoid or middle ear along the facial canal, is an easier and more direct one towards the middle cranial fossa than towards the internal auditory canal and thence into the posterior cranial fossa. The ordinary Schwartze operation, indicated in acute cases, should not be difficult, unless the bony wall of the canal has been destroyed and replaced by granulation tissue, thereby disguising the presence of the facial nerve and exposing it to instrumental attack.

The finding of frequent dehiscences in the facial canal also indicates the power of resistance that is exhibited by an exposed nerve—the occurrence of paralysis of the facial nerve accompanying middle ear inflammation being rare.

In removing the ossicles or curetting the tympanic cavity to remove granulation tissues and carious bone, two regions should be treated guardedly. There is reason to fear the region just above the fenestra ovalis and backward from this to the floor of the aditus and the bony posterior wall of the tympanic cavity, as manipulation here is fraught with danger to the facial nerve. The greatest danger to the nerve exists in doing the radical operation. According to the author, crowding into the sinus wall or the middle cranial fossa would be preferable to injury of the facial nerve.

* * * *

THE EXAMINATION OF THE BLOOD IN CHILDREN BEFORE AND AFTER THE REMOVAL OF ADENOID VEGETATIONS.

Dr. Takabatake, of Nagasaki, Japan, in the *Archives of Otolaryngology*, Feb. 1905, calls attention to the investigations of Lichteritz and Sabrazes who found that the general condition of patients operated upon for adenoids became much improved, and that there was a decided improvement in the constituents of the blood. They found that the quantity of hemoglobin was always increased, and that the number of red cells was increased, and that the number of white cells diminished. The examinations were made at no regular time, in some instances not until several months after the operation.

The author examined twelve cases, selecting the twenty-eighth day for investigation. In eight of the cases the hemoglobin was increased, as were the number of red blood corpuscles. In the other four cases a diminution occurred. The number of white corpuscles was diminished in all of the cases. All types of white blood cells were not decreased

in the same proportion. The polynuclear and the eosinophile cells were slightly increased, while the lymphocytes and the mononuclear cells were diminished, but as their diminution was greater than the increase of the other, a general diminution of the colorless cells resulted. The diminution of white cells and increase of the hemoglobin and red cells indicate an improvement in the blood. The general condition improved in all of the author's cases, the body weight increasing.

* * * *

OBSERVATIONS ON THE PROGNOSTIC AND DIAGNOSTIC VALUE OF RETINITIS IN DIABETES.

In the *Royal London Ophthalmic Hospital Reports of June, 1904*, E. Nettleship sums up his experience with this class of cases, from which he concludes that the presence of retinal changes in diabetes does not point to the probability of early death with the same frequency as does the retinitis of chronic Bright's disease. The report includes forty-eight cases, the patients' ages varying from forty-one to seventy-nine years. Of the forty-eight patients thirty-eight are known to have died, nine of them within twelve months of the discovery of retinitis or the failure of sight caused by it, eleven during the second year. The remaining eighteen died at intervals varying between two to eight years. The ten other cases were living at dates varying from two to ten years from the retinitis at the time of the report. Thus it was found that sixty per cent. of the cases lived more than two years after the disease was found, and only about one-fifth died within one year.

In renal cases of retinitis the author noted that less than one-third lived two years after the discovery of the retinitis, and nearly two-thirds died within a year. The prognosis for life is, therefore, clearly much better in the diabetic cases of all ages than in the renal cases of all ages (excluding those caused by pregnancy.) Most of the cases of diabetic retinitis occurred after the age of fifty. Comparing renal cases occurring at the same time of life to the diabetic cases it was found that the relatively more fatal significance of albumenuric retinitis holds as decidedly for the more senile group as for the entire class. The difference in the duration of life in the two diseases depends most likely upon the nature of the two maladies, and not upon the age of the subject. The character of the changes in diabetes is less uniform than in Bright's retina, making a certain diagnosis more difficult than in renal retinitis. The retinal involvement in diabetes seems to be more of a local affair than in renal diseases, for it has been found that the retinal degener-

ation in diabetes often increases steadily or by repeated relapses, notwithstanding improvement in the general condition of the patient. The prognosis as regards the improvement in vision should therefore be guarded in diabetic retinitis.

* * * * *

STRABISMUS AND ITS TREATMENT.

In a brief practical paper in *American Medicine*, of Jan. 28, 1905, C. M. Harris, M. D., of Philadelphia, takes up the chief forms of squint, the causes and treatment. He points out that parents and physicians are often careless about having cross-eyed children put under proper treatment and that it often remains for the patient himself to arrive at he age of discretion before realizing the cosmetic and visual disadvantages resulting from such a condition. The erroneous idea exists among the laity, even among the more intelligent, that the patient may outgrow the affection. The defect is usually of the convergent variety and appears in most cases between the third and fourth year. These are usually of the monolateral type, while those cases occurring after the fifth year are of the alternating variety. The author gives as the causes of squint the accepted classification of De Schweinitz as follows:

"1. Disturbance of the relation between accommodation and convergence by errors of refraction. 2. Disparity in length, thickness and tension of opposing muscles. 3. Inequality in the vision of the two eyes, or amblyopia in one eye, which removes the natural stimulus to exact convergence. 4. Disturbance of innervation and defective development of the fusion faculty."

It is important, whether the error of refraction be high or low, that it be fully corrected so as to get the co-operation of all of the factors concerned in muscular equilibrium. In high hypermetropia the excessive accommodation to overcome the refractive error brings about excessive action of the adductors, and convergent squint results. In high degrees of myopia the opposite condition of affairs exists; in the endeavor to relax the accommodation, convergence is accordingly decreased and divergence results. In the squint due to error of refraction as well as the cases due to the other cited causes, careful early treatment is essential to insure gratifying results. The accepted time for beginning treatment is as soon as the deviation is detected.

According to Jackson, the indications met

by treatment are as follows: "1. To bring about normal innervation of the muscles concerned in ocular movements, by the removal and exclusion of abnormal requirements and abnormal overflow influences. 2. To place and keep the eyes, as far as possible, upon the best plane of visual acuteness and an equality of required effort. 3. To eradicate abnormal methods of using the eyes, especially dependence upon one eye to the practical exclusion of the other. 4. To develop binocular vision—the method of combining the visual sensations produced by the two eyes and the habit of employing them both in all ordinary seeing.

As squint usually begins before children are old enough to be given a subjective test, the errors of refraction have to be determined by the use of the ophthalmoscope and retinoscope, and under the full influence of atropia. The atropia should be continued for several weeks, or even months, depending on the progress of the case. If the vision of the deviating eye is poor the better eye should be closed for several hours each day by wearing a pad, or tropia should be instilled into the better eye for some time in order to throw the burden of the work on the weak eye and stimulating its development.

CARD FROM THE K. S. M. A. COMMITTEE ON PUBLIC POLICY AND LEGISLATION IN KENTUCKY.

The undersigned, having been appointed Committee on Legislation and Public Policy of the Kentucky State Medical Association, ask any member of the Association who may have any law to propose or suggestion to make, to communicate with a member of this Committee. Laws providing for a State Sanatorium for Tuberculosis, a non-partisan Board of Control for all public institutions, a better plan of collecting vital statistics and a State Epileptic Colony have been suggested.

GEORGE P. SPRAGUE,

Lexington, Ky.

W. W. RICHMOND,

Clinton, Ky.

BEN L. BRUNER,

254 W. Walnut St.,

Louisville, Ky.

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THE COUNCIL OF PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION.

The Association of State Medical Journals has been casting about for some effective means whereby the ethical status of proffered advertisements could be determined. While some advertisements are on their very face objectionable and beyond the pale, and others are acceptable without further ado, there yet remains a large class about which it is not easy to come to a satisfactory conclusion. Further than this, it is practically certain that some of the formulae furnished of proprietary medicines are not true formulae at all. And yet the detection of such fraudulent statements is a matter of the greatest difficulty. For these reasons we welcome the announcement from the American Medical Association of the establishment of a Council on Pharmacy and Chemistry.

To quote from supplement to Bulletin No. 1, recently received from the A. M. A.: "It is the immediate purpose of the Council to examine into the various preparations that are offered to physicians, and which are not in the Pharmacopoeia. These preparations will include the synthetic chemical compounds, as well as the so-called proprietaries and pharmaceutical specialties put out under trademarked names. Such preparations as come up to the standard called for by the ten rules governing the matter, will be incorporated in the book to be called "New and Non-Official Remedies," which *The Journal of the American Medical Association* proposes to publish annually.

The general need of an accessible, authoritative book of reference of this character is obvious, for at present there is no such book to which physicians can refer. Its value will be proportional to its completeness. It is, therefore, proposed to be as liberal in approving articles for the book as is consistent with justice and equity to the public, to the manu-

facturing pharmacist and chemist and to the physician. The acceptance of articles will be determined by the appended rules, an examination of which will show that they are sufficiently liberal to permit the acceptance of all articles offered to the medical profession that are properly made, honestly exploited, and worthy of patronage by intelligent physicians.

The acceptance of an article will be based on a careful and unprejudiced examination of the accessible sources of information, and in accordance with the rules. Its acceptance is not to be interpreted as an endorsement of an article; the Council does not pass judgment on the therapeutic value, but on the ethical status only. Omission from this list, on the other hand, will not in every case condemn an article; it may mean that the necessary information has not yet been obtained. The Council does not presume to dictate what preparations should be prescribed; nor is it the present intention to conduct an active campaign against fraudulent products; but merely to supply information concerning those which it considers objectionable.

The plan for the work is briefly as follows: All information regarding a product will be obtained from the manufacturer and from other sources. This information, together with samples of the article, will be submitted to a sub-committee of experts, who will examine critically into the product, consider the claims made for it, and make its report. On the basis of this report, the Council will accept, reject, or hold for further consideration. If accepted, the information will be condensed and arranged somewhat on the plan of the Pharmacopoeia, but with the addition of brief pharmacologic and therapeutic data to be published in the book. Many articles not now in the Pharmacopoeia are recognized as coming up to the standard and will need no investigation. In this class come many of the synthetics, as well as recognized pharmaceutical specialties. These are now being written up and it is proposed to issue this book as soon as possible.

As fast as new articles are accepted, all information regarding them will be published in *The Journal of the American Medical Association* and be incorporated in the next edition of the book.

The Council appreciates the difficulties before it; it does not dare to hope for perfect results; it can only promise to strive earnestly, honestly and impartially to avoid serious errors of commission and omission. The importance and difficulties of the work undertaken are appreciated, and the Council hopes to make no step forward without being sure that it is right and just to all concerned. It

asks for the hearty co-operation of all who are interested in the work, which it believes to be the entire medical profession and all honorable manufacturing pharmacists and chemists. Criticisms and suggestions will be welcome."

RULES GOVERNING THE ADMISSION OF ARTICLES TO THE PROPOSED BOOK, "NEW AND NON-OFFICIAL REMEDIES."

The following rules are adopted to guide the Council on Pharmacy and Chemistry of the American Medical Association in accepting articles for insertion in the above book:

(The term "article" shall mean any drug, chemical or preparation used in the treatment of disease).

Rule 1.—No article will be admitted unless its active medical ingredients and the amounts of such ingredients in a given quantity of the article be furnished for publication.

(Sufficient information should be supplied to permit the Council to verify the statements made regarding the article, and to determine its status from time to time).

Rule 2.—No chemical compound will be admitted unless information be furnished regarding tests for identity, purity and strength, and, if a synthetic compound, the rational formula.

Rule 3.—No article that is advertised to the public will be admitted: but this rule will not apply to disinfectants, cosmetics, foods and mineral waters, except when advertised in an objectionable manner.

Rule 4.—No article will be admitted whose label, package, or circular accompanying the package, contains the names of diseases in the treatment of which the article is indicated. Therapeutic indications, properties and doses may be stated. (This rule does not apply to advertising, nor to literature distributed to physicians).

Rule 5.—No article will be admitted or retained about which the manufacturer, or his agents, makes false or misleading statements regarding the country of origin, raw material from which made, method of collection or preparation.

Rule 6.—No article will be admitted or retained about whose therapeutic value the manufacturer, or his agents, make unwarranted, exaggerated, or misleading statements

Rule 7.—Labels on articles containing "heroic" or "poisonous" substances should show the amounts of each of such ingredients in a given quantity of the product.

Rule 8.—Every article should have a name or title indicative of its chemical composition or pharmaceutical character, in addition

to its trade name, when such trade name is not sufficiently descriptive.

Rule 9.—If the name of an article is registered, or the label copyrighted, the date of registration should be furnished the Council.

Rule 10.—If the article is patented—either process or product—the number and date of such patent or patents should be furnished. If patented in other countries, the name of each country in which patent is held should be supplied, together with the name under which the article is there registered.

The names of the following well known men are appended as members of the Council:

C. Lewis Diehl, Louisville.

C. S. N. Hallberg, Chicago.

Robert A. Hatcher, New York.

I. F. Kebler, Washington.

J. H. Long, Chicago.

F. G. Novy, Ann Arbor.

W. A. Puckner, Chicago.

Samuel P. Sadtler, Philadelphia.

J. O. Schlotterbeck, Ann Arbor.

Torald Sollmann, Cleveland.

M. I. Wilbert, Philadelphia.

H. W. Wiley, Washington.

Those of the State Medical Journals which have had much at heart the forwarding of the cause of ethical medical advertising will welcome the formation of this Council as the possible happy solution of a serious difficulty. The attitude of the Journal A. M. A. in regard to advertising, or rather the attitude which the medical journals of the country have been compelled to assume as that of the Journal A. M. A., has made almost fruitless the efforts of the State journals to place their advertising on a high plane. Only two or three have had the backbone and nerve to turn their eyes steadfastly away from vulgar profits and keep them fixed on the ethical, the ideal. And yet it is barely possible these few have been deceived, and are destined to be deceived yet again by spurious and fraudulent formulae.

To illustrate the handicap which the assumed position of the Journal A. M. A. has placed on the State Journals, we quote the following from the January 13th. issue of the Virginia Medical Semi-Monthly:

"The American Association of State Medical Journals last June, at Atlantic City, proclaimed the following: 1. No journal of this Association shall accept an advertisement of a medicine which is not ethical; and 'ethical' shall mean that the product advertised shall have published with it not only the names of its constituent parts, but also the amount of such constituents, so that a definite dosage can be determined. Further, such product must not be advertised to the laity. 2. If a product is marketed under a copy-

right name, the manufacturer shall furnish with it the proper chemical name; and if not patented then also the process of manufacture. 3. All advertisements not covered by the above paragraphs, or which contain extravagant or impossible claims, shall be submitted to the executive committee for approval before they can be accepted.

Vote was taken on the above proclamation of principles, but the matter is held over until the Portland, Oregon, meeting, June 1905.

It is a well-fixed principle in good government that the servant must not be above his master. As long as the *Journal of the American Medical Association* accepts such advertisements, it is idle foolishness for the smaller journals—the so-called State journals—to say they will not. A law which is not sustained by popular approval soon becomes obsolete in its effect."

The editor then launches forth into a practical defense of proprietary medicines, advocating their use and advertisement quite irrespective of whether the user (the physician) and the journal accepting the advertisement are aware of the composition, qualitative and quantitative, of the preparation or not. This position is understandable when we consider that the journal in question is a proprietary one.

The *Journal of the Kansas Medical Society* (January, 1905) discusses the question and concludes that, until all the State Journals can get together on a common standard and can arrange for a common advertising agent, it must make the most of what it can get. It feels that the members of the medical profession are not as sheep for the slaughter; it credits them with abundant discretion, and feels that its duty is practically fully done when it lays the claims of one and all advertisers before its readers, flattering these latter by a hearty expression of confidence in their ability to choose only the good. If questioned closely we would be quite prepared for the statement by the editor of this journal, that as the *Journal A. M. A.* has done this thing for profit, why should we not do it too?

Colorado Medicine, the *State Journal of Colorado*, not one of the largest but one of the best of the State Journals, discusses medical journal advertising at some length (Jan. 1905), and concludes that if a proper exclusion be practiced and at the same time the truth be told concerning circulation, the revenue obtained from this source is so small as to be altogether unimportant. Therefore, the Colorado Publication Committee has decided to exclude all advertisements, for the present at least, from Colorado Medicine. The article concludes as follows:

"Still, when medical journal advertising can be placed on an ethical and sound business basis, there is no reason why the journal of a state medical society may not engage in it, and we are more than willing to do what we can to place it on such a basis."

In our opinion the Council of Pharmacy will be of the greatest possible assistance in placing medical journal advertising on an ethical and sound business basis. And to that end we bespeak for the measure the hearty and enthusiastic support of all State Medical Journals.

It is to be expected that the proposed plan will not meet with universal favor with medical journals in general, for the reason that the owners and editors of proprietary journals are sometimes men first and physicians afterwards. In the nature of things, then, they can scarcely be expected to welcome a measure which will surely result in cutting out advertisements, and so cutting down profits, one great reason for the existence of so many journals. For this reason all the greater duty falls to the State Journals to give support with all their power and all their might, in the full assurance that the pages of the *Journal A. M. A.* will be the first to suffer at one and the same time, the greatest loss and the greatest gain.

ETHICAL PHARMACY.

The article which follows is from the pen of A. L. Benedict, A. M., M. D., of Buffalo, N. Y. The subject matter is of both great interest and importance. Dr. Benedict is so happy in his methods of expression that we have transferred his article bodily from the pages of *American Medicine*, Nov. 26, 1904, to which *Journal* we here express our sense of obligation:

The typical city drug store represents a bizarre combination of businesses. It is usually a public telephone station, often a branch post-office, express office, place to pay gas bills, sometimes a branch circulating library, and laundry. One can buy candy, hair brushes, tooth brushes, soap, valentines, knives and various other articles of merchandise, tobacco, soda water and other soft drinks, and occasionally strong liquors as beverages. At some stores one can even obtain a light lunch; at others, pet animals, gold fish, etc. In short, if you want anything and do not know exactly where to seek it, it is a good rule to ask at the drug store. There is no particular ethical objection to the drug store serving as a miscellaneous caterer to the wants of the public, although the physician, who is wont to take his medical equipment rather seriously and exclusively, never quite recovers from the in-

congruity of such signs as "prescription counter in the rear," "prescriptions a specialty," etc. It certainly would surprise the public if, after our name on a sign, we displayed some such notice as this: "A specialty made of attending to patients."

However, the public is not allowed to forget that the drug store exists for the purpose of selling remedial agents. More or less startling, and often life-size, display cards remind us of the virtues of plasters "which feel good on the back," and which serve partially to hide the charms of ladies and gentlemen in undress. Menstrual pads make an attractive window dressing, especially if flanked with an illustrated reminder of tablets which work while we sleep and break the monotony of a night's rest in a sleeping car. Gigantic green frogs amuse the children and remind adults of the frog in their throats, while vaginal syringes are instructive to the young and afford a subject for thought on the part of statistician who is interested in our falling birthrate. A pasteboard trained nurse can be made to advertise pretty nearly anything, and if she can do some automatic feats with an atomizer or a sprinkler, she is doubly charming.

On entering the store, we find that the front shelves and, indeed, sometimes all that are visible, between the soda fountain and the prescription department, are devoted to an object lesson in the uselessness of our own profession. It even seems strange that there should be a prescription department at all, when all the ills to which humanity is heir can be relieved by the purchase of the appropriate remedy, neatly and not very expensively compounded, and with explicit directions for the guidance of patients, either on the label or included with valuable information as to the sun, moon, and stars, or a complete joke book or collection of popular songs.

However, the patient who runs the gauntlet of the proprietary medicines and who escapes the druggist's own advice as to headaches, rheumatism, bronchitis, etc., is welcome to present his prescription at the desk, and, if we have been careful to avoid the metric system and have limited ourselves to codliver oil, calomel, and tincture of opium and similar staples, he can get it filled with slight risk of error and with reasonable promptness. If, however, we have written for some such troublesome preparation as oil of phosphorus, or bromin, or for some new drug not yet in constant demand, the patient may have to wait until it is sent for and, unless one practices in New York, Philadelphia, Chicago, and a very few other centers of trade, several days may elapse before the order is filled. Why, as a profession, do we endure all this from a profession which is avowedly a spe-

cialization of our own, for the purpose of supplying medicines and medical appliances? Because, in the first place, we cannot help ourselves, and because, in the second place, in the majority of instances, the druggist is, at heart, not only a good fellow, but an intelligent and conscientious man, who cannot help himself either, but is hampered by all sorts of customs, who is under the screws of wholesale dealers of all shades of respectability, and who is subject to the same, if not greater, competition in an overcrowded profession which we realize in our own experience.

If the druggist did not sell stamps, soda water, hair brushes, and act as agent for the gas company, the express companies, the telephone company, the laundry, and even for Uncle Sam's postoffice, his store would fail in popularity. We can have no reasonable objection to the sale of soap and tooth powder. It is only a step to porous plasters and antiseptics, and only another step to headache powders, liniments, cough syrups, and cathartics. The patient will not, under existing conditions, take our prescriptions to a man who will not sell him his own selection of drugs and aid him in that selection. Many druggists are courteous enough to look embarrassed when we happen to be in the store to see if he can fill a prescription for something a little out of the ordinary, and a man comes in and announces that he wants something for his liver, or for his little boy with croup. Some have become so accustomed to such occurrences that they overlook even this deference to our suppositious function and privilege.

I am convinced that the druggist cannot help himself out of his present predicament, without the initiative of the medical profession. Some druggists want this assistance, some do not. Some openly declare that they do not care to bother with prescriptions. One man, of whom I know personally, issues cards of this form with every prescription: "This prescription is a valuable formula for . . . Yourself or any of your friends can get it on payment of . . ." Thus, every physician whose prescription reaches this store becomes the originator of a quack medicine, without any of the emoluments of quackery. On the other hand, there are pharmacists of good standing, who are not adapted to teaching positions, who cannot write textbooks or secure official appointments of one kind or another, who love their chosen profession and who are practically debarred from practice unless they submit not only to an irksome commercialism, but to methods that they recognize as unethical and, potentially, at least, as dishonorable and murderous.

The solution of the whole problem is per-

fectly simple in theory, and it has been carried into practice with some degree of success in occasional instances. Find a pharmacist who is qualified in his profession, who wishes not only to make a specialty of prescription compounding, but who will limit himself to such work. Having found one such man in a city, apply exactly the same rule to him and his competitors that should be applied to the genuine and the fake specialist in any other line of medical subdivision. If the ophthalmologist, laryngologist, or neurologist is posing as a specialist and at the same time competing with the general practitioner in his own legitimate field, while some other specialist is doing honest work in his specialty, the responsibility rests with the general profession, for no specialist can succeed with a double-barreled gun if the general practitioners refuse to start the game for him. In the case of the druggist, the offense against the ordinary laws of specialism is even more flagrant, for the druggist is neither competent nor legally qualified to compete with the medical profession.

A study of the directory of any city will show that there is one drug store to every five to ten physicians. Many of these stores have a force of five or more pharmacists, few have less than two, including advanced students. It is absurd to suppose that the legitimate profits on prescriptions, even including the earnings and profits on agencies, soda water, etc., can support any such ratio of pharmacists. The bulk of the support of the so-called pharmacal profession is the patent medicine business and the illegal practice of medicine. Curiously enough, my personal experience has been that the very men who are interested in pharmacal education; who are officially represented with our own profession in the codification of drugs, and who make the best speeches as to the dignity of the profession of pharmacy, have been the most flagrant violators of the principles of ethics, and have made the most glaring mistakes in the practice of their profession. Understand me, however, to refer merely to isolated examples, and to make no general charge against either the profession of pharmacy in general or its most representative portion.

The solution of the problem proposed must, if successfully carried out, involve a marked diminution in the numbers of pharmacists in good standing and a practical separation of the pharmacist as a professional man from the soda-water, agency-conducting, retail quack and counter-dispensing business man. Such separations are always wholesome. We can fight or ignore quackery and illegal practice. In the long run it makes more work for the regular profession than it removes by

competition, and while it is our obvious duty to combat it in the interests of the community, we are not called upon to place ourselves in a false light and reduce our influence for good by unwise attempts at interfering with a too powerful influence.

While there is no particular objection to the various extra-medical side lines carried on in the average drug store, it is obvious that unless some druggist already is business were willing to eliminate from his store the entire middle portion and the show window, it would be practically impossible to continue them. The only ethical pharmacy on a practical working basis that I have ever actually seen consisted of a comparatively small room in a medical office building. There was no pretense at catching custom by attractive displays, and the drug stock itself was not imposing, but I was assured that it contained almost everything prescribable by a man in regular practice, including most of the newer chemical and the really valuable, ethical proprietary preparations. It was supported by about twenty physicians, and prescriptions were filled not only well, but comparatively cheaply, and to the satisfaction of the intelligent laity. Presumably, other druggists did not like it, but if not, they had every freedom of competing on the same basis.

Some question may be asked as to the business relations of physicians to such a pharmacy. My own idea is that there should be none, further than the informal understanding that the physicians should, so far as possible, send their prescriptions to the man who refrains from extraprofessional and unprofessional drug business and also, so far as possible, keep them from passing into the hands of druggists competing on present methods. It may be objected that such a course will lead to the suspicion of interested motives. Undoubtedly, this suspicion will arise as it does under existing circumstances, and I am informed with ample basis of truth in some instances. Druggists, on whose word I can rely, have stated that they have been practically forced to pay commissions, although one cannot respect the stamina of a druggist who would yield to such a demand much more than the integrity of the physician who would make it. However, the charge of dishonorable motives is readily met in any particular case, and as the language appropriate in such an emergency would not be appropriate to this occasion, it is unnecessary to enter into details.

COUNTY SOCIETIES.

[Secretaries of county societies are requested to furnish for this column, and without further notice, all county society news of interest, such as the date and place of the monthly meeting, notice of death and marriage, epidemic disease, and, in fact, everything which might be of interest to brother practitioners in the State.]

The *Barren County Medical Society* held its regular monthly meeting Tuesday, January 3rd, and elected the following officers for the year 1905: Dr. J. J. Jepson, President; Dr. J. S. Leech, Vice-President; Dr. F. J. Taylor, Secretary-Treasurer. The weather being inclement there was barely a quorum present.

The health of our county and especially of the city of Glasgow, is remarkably good. No smallpox or other contagious or infectious disease is now prevalent within our borders.

The dates of our regular meetings for the present are the first Tuesday in each month at the Court House in Glasgow.

The *Bourbon County Medical Society* has been true to its past record for good meetings and interesting programs. In January the society met with Dr. W. C. Ussery, in his suite of offices. The subject for the evening was "Appendicitis." Dr. Wm. McKinney read a paper on "Diagnosis;" Dr. Robert Carothers, of Cincinnati, Ohio, read a very complete, able and conservative paper especially devoted to "Surgical Treatment;" Dr. Jas. Eichbergs paper on "The Medical Aspect" was read in his absence by the secretary. Dr. J. S. Walling opened the discussion, which was entered into by all of those present, including Drs. A. H. Barclay, W. B. McClure, and Wrather, of Lexington, and Drs. Moore and Wells, of Cynthiaana.

At the conclusion of the program an elegant collation was served and the remainder of the evening was spent in social session.

For its February meeting the society took up the subject of influenza, with papers on "The Pulmonary Form," by Dr. A. C. Wilcott, of Hutchison, and "The Intestinal Form," by Dr. W. G. Dailey, of Millersburg.

The society was entertained quite handsomely at its regular monthly meeting on March 16th, at the home and offices of Drs. Robert F. and Margaret C. Wood. A bounteous course dinner was served to representative membership of the society. The purpose of the meeting was to consider means for the establishment and maintenance of a hospital in Paris. The society passed a resolution "that it was the sense of the society that he ladies of Paris should establish a hospital to cost not less than \$15,000.00." As a means of aiding the movement the President

appointed as "Press Committee" Drs. Robert T. Wood, Silas Evans and C. Bruce Smith; "Ways and Means Committee," Drs. F. M. Faries, J. T. VanSant, F. Fithian, W. C. Ussery, and C. G. Daugherty; "Committee on Subscriptions from Physicians," Drs. Anderson, Dailey, Fithian and Lapsley; "Committee to meet Ladies' Committee," Drs. Ussery, Lapsley and Daugherty. The meeting was a very enthusiastic one and in many respects has demonstrated the wisdom of the plan of reorganization.

C. G. DAUGHERTY, Sec'y.

The *Christian County Medical Society* met in the city court room in Hopkinsville, on March 20, 1905. The new officers installed for the year 1905 were as follows: President, Dr. C. B. Petrie; Vice-President, Dr. Austin Bell; Secretary-Treasurer, Dr. J. W. Harned; Delegate, Dr. Andrew Sargent.

Two papers were read, one on "Urethral Stricture," by Dr. C. B. Petrie, the other on "Syphilis and its Treatment," by Dr. J. W. Harned. Both papers were freely discussed.

The attendance at the meeting was very encouraging, the following being present: Drs. Andrew Sargent, C. B. Petrie, Austin Bell, Gates, Jackson, McDaniel, Blakey, Stites, Haynes, Woodard, Harned, Edwards, and Thomas.

The next meeting will be held on April 17, 1905, at 10:30 a. m.

J. W. HARNED, Sec'y.

The *Clark County Medical Society* met at the office of Dr. Shirley, in Winchester, the second Saturday in January, with about a dozen members in attendance. Dr. F. H. Clarke, of Lexington, President of the State Medical Association, was present by invitation and read a most excellent paper on Medical Ethics. He was, by a unanimous rising vote thanked for his paper and visit. Dr. S. W. Willis followed with an interesting and up-to-date paper on the all important subject of the "Progress of Medicine, Its Aids and Hindrances." This, like its predecessor, was highly praised and lengthily discussed. The following officers were elected to serve during the year 1905: President, Dr. A. F. Goodwin, of Wade's Mill; Vice-President, Dr. Geo. F. Clark, Winchester; Secretary-Treasurer, Dr. Howard Lyon, Winchester. Dr. Lyon's petition for membership had been acted upon favorably, previously. The society then repaired to Moore's "Cafe" where an enjoyable dinner was served.

I. A. SHIRLEY, Sec'y.

The *Clark County Medical Society* met in regular session at the office of Dr. I. A. Shir-

ley in Winchester, on February 11, 1905. Drs. McKinley, Stephenson, Shirley, Goodwin and Lyon were present. The minutes of the last meeting were read and approved. Dr. Shirley was elected delegate; Drs. Combs, Willis and McKinley were elected a Board of Censors to serve three, one and two years.

Dr. Shirley's paper on "Prognosis in Nephritis" elicited an interesting discussion.

Dr. M. S. Brown was retained and Dr. Lyon added as essayists for the March meeting.

The meeting was then adjourned to meet at the office of Dr. Lyon the second Saturday in March.

HOWARD LYON, Sec'y.

P. S.—Dr. T. H. McKinley sustained a fracture of the clavicle by falling on the sleety ground last Wednesday.

The *Daviess County Medical Society* met at the City Hall in Owensboro, in regular quarterly session on March 21, 1905. The president, Dr. J. D. Russell, of Yelvington, presided. Thirty-four physicians were present. Drs. J. L. Early, B. F. Tichenor, G. A. Hardwick and J. A. Kirk were admitted to membership.

Dr. S. J. Harris reported a case of pneumonia in a child with periodic bleeding from the gums, which ceased only after the administration of quinine.

Dr. C. H. Todd read a paper on "The Function of the Cecum and Appendix." The paper was very interestingly discussed by several members.

The society took dinner at the Rudd House, the city physicians as hosts and those from out of town as guests.

At the afternoon session Dr. S. P. Oldham read a paper on "Grippe and Its Treatment." It was discussed by several members.

Dr. R. E. Griffin read a paper on "The Influence of Modern Surgery on Obstetrics;" an interesting discussion followed.

The society will meet at Sorgho on the third Tuesday in June.

J. J. RODMAN, Sec'y.

The *Fayette County Medical Society* held its regular monthly meeting February 14, 1905, at the court house in Lexington, with a very full attendance. The essayist of the evening was Dr. F. H. Clarke, who read a very instructive paper on "Phlebotomy." He showed how, after having been the mainstay of the medical profession at one time, it had come to be absolutely neglected; but more recently it was being recognized as a most valuable therapeutic agent in certain conditions, as cerebral hemorrhage, cardiac lesions with

hypertrophy above the necessary compensation, certain toxæmic conditions and persistent arterial hypertension from any cause, especially nephritis. He reviewed the different phases and causes of variations of blood pressure, quoting from Dr. Janeway's authoritative work on the subject. Dr. Barkley opened the discussion and the different members participated in it freely. Dr. Bullock reported his experience with phlebotomy in a number of cardiac and nephritic cases, getting very great benefit from this treatment alone.

Dr. Scott presented a very interesting case of a young man who had been thrown from a moving train, striking on his shoulder and arm. The upper third of the shaft of the humerus was crushed destroying all the soft parts in that region, including the deltoid muscle, with the exception of a narrow strip of tissue along the inner side of the arm barely thick enough to contain the great vessels and nerves of the extremity. The loss of substance in the soft parts had been filled in by scar tissue and there is now present good flexion of the forearm on the arm and the use of the forearm is practically normal. In some remarkable manner the musculo-spiral nerve escaped injury. This case illustrated very forcibly what can sometimes be done by conservative surgery in traumatic injuries of the extremities.

Dr. McClure reported a case, which he saw with Dr. Barkley, of a fractured skull with thrombosis of the lateral sinus and blood clot in the mastoid cells.

The society will meet as usual on Tuesday after the second Monday in March, at the Court House in Lexington, at 8 p. m.

The *Franklin County Medical Society* met March 3rd, 1905, with Dr. U. V. Williams as host, to celebrate with him his Golden Jubilee in the practice of medicine. The secretary of this society wishes he could do the occasion the same justice from a literary as he did from a gastronomic standpoint. The menu was one of the most delightful ever discussed by the society, the decorations a "dream of loveliness" and the toasts in keeping with the occasion. At the conclusion the society presented Dr. Williams with a beautiful gold thermometer case to commemorate the event.

The toasts were as follows:

1. Leviticus xvi:11: "A jubilee shall the fiftieth year be to ye," Rev. M. B. Adams.
2. "So we grew together like a double cherry, seeming parted"—(Love's Labour Lost), Dr. William Bailey, Louisville.
3. "Who mixed reason with pleasure, And wisdom with worth."

Dr. J. P. Stewart, Stewart's Home.

4. "As I have known him," Dr. E. E. Hume, Frankfort, Ky.

5. "Here's to the friends we class as old,
Here's to those we class as new,
May the new ne'er to us grow old,
And the old ne'er grow new."

Dr. T. C. Neat, New Albany, Ind.

6. "Where are the castles in the air,
That childhood built in life's warm
spring,

Those tender hopes that budded fair,
Have they no flowers yet to bring?"

Dr. John Glover South, Frankfort, Ky.

7. *Woman*: She needs no eulogy—
She speaks for herself—
She is the endurable aristocrat—
Elects without voting—
Governs without law—
And decides without appeal.

Dr. James B. Bullitt, Louisville, Ky.

8. Incongruities. The Host.

9. What has been achieved in the Nine-
teenth Century—mostly within the memory
of the host. Dr. Flora W. Mastin, Frankfort,
Ky.

10. If you want to live long and be hap-
py, play the game as our host has done if the
ante isn't too high—only the lucky live to tell
the tale. Dr. Wm. Cheatham, Louisville, Ky.

11. "O wad some power the giftie gie us
To see oursels as ithers see us."

Dr. George F. Thompson, Frankfort, Ky.

12. What I would like to say about him.
Dr. James R. Ely, Frankfort, Ky.

13. Office Experiences. Dr. Neville M.
Garrett, Frankfort, Ky.

14. "Care to our coffin adds a nail no doubt,
Every grin so merry draws one out."

Dr. C. A. Fish, Frankfort, Ky.

15. The Good die young—
Here's hoping you may all live long.

Dr. Emmett Allen, Bridgeport, Ky.

16. Some of us have what we want all the
time,

All of us have what we want some of
the time,

But we can't all of us have all we
Want all of the time.

Dr. Louis Frank, Louisville, Ky.

17. Between two worlds we hover like a
star,

'Twixt night and morn upon the hori-
zon's verge,

How little do we know that which we
are,

How less what we may be.

Rev. Wm. Crowe, Frankfort, Ky.

And now we begin the next half century.

Dr. Williams, the Nestor of medicine in
this county, was here when the memory of
the oldest inhabitants runneth not back to the
contrary. He was educated at the Kentucky

Military Institute and was a member of the
faculty for twenty-six years. He graduated
in medicine from the Jefferson Medical Col-
lege under such men as Robley Dunglison,
the elder Gross, J. K. Mitchell, William Pan-
coast and Charles D. Meiggs.

He was present at the organization of the
Kentucky State Medical Society and is prob-
ably the only physician living who was
present at that meeting. Dr. Williams has
had a remarkable career; he has never taken
a vacation or a day off for pleasure, he has
never been confined to his bed a week at a
time from illness, but from accidents often;
he has had more broken bones and disloca-
tions in the past thirty years than he can
number. He has been in two railroad wrecks
and one steamboat accident, has been burned
out twice, once a complete loss. Yet with
all this, he is hale and hearty and enjoys a
large practice which he seems competent to
keep for another fifty years.

The society unites in congratulating Dr.
Williams on his successful professional life
and wishes him many more years of active
duty.

W. E. ALLEN, Sec'y.

The *Grant County Medical Society* met in
the office of Dr. N. S. Matthews in Williams-
town, February 9, 1905, at 10 o. m. In the
absence of the president and vice president,
Dr. I. N. Fraid was elected president, pro
tem, and called the society to order.

The essayist, Dr. C. D. O'Hara, being ab-
sent on account of the serious illness of his
father, the subject of "Burns" was very ably
placed before the society by Dr. I. N. Fraid.
His talk was very interesting and instructive.
The subject was thoroughly discussed by all
members present.

Dr. John Loomis made application for
membership and was unanimously elected.

Dr. John Violett, of Williamstown, was
elected as delegate and Dr. J. G. Renaker, of
Dry Ridge, alternate, to the State meeting.

The Committee on Program reported a pa-
per on "Pneumonia" to be read by Dr. Vio-
lett at our next meeting which will be held
with the North Kentucky Medical Society in
Williamstown, the second Thursday in May,
1905.

J. G. RENAKER, Sec'y.

At a regular meeting of the *Henderson
County Medical Society* held February 27th,
1905, the following resolution was introduc-
ed and unanimously passed: That, whereas
Kentucky has so far not availed herself of the
privilege of placing statues of two of her
most distinguished citizens in the National
Capitol Hall of Fame, as provided in the act

approved by President Lincoln, July 2nd, 1864, which authorizes the Chief Magistrate "to invite each and all states to provide and furnish statues in marble or bronze, not exceeding two in number, for each state, of deceased persons who have been citizens thereof and illustrious for their historic renown or from distinguished civic or military services, and when so furnished the same shall be placed in the old hall of the house of representatives in the capitol of the United States."

Therefore, be it resolved, that in recognition of the distinguished ability of Dr. Ephriam McDowell, that the Kentucky State Medical Society be requested to use its influence in every way possible to the end that Kentucky be represented by Dr. McDowell, and that in advance of the next regular meeting of the State Society, the Kentucky Medical Journal, being the Journal of the Kentucky State Medical Association, be requested to use its influence to the same end.

J. C. MOSELEY, Com.

The *Knox County Medical Society* met in regular session on December 20, 1904, in the office of Dr. G. H. Albright, Barbourville, Ky. The meeting was called to order by the president, Dr. Albright, and the program of the day was immediately taken up.

Dr. Doxier read a most practical paper on "La Grippe," portraying the disease in a very vivid manner and rendering it of unusual interest to the listeners from its recital of many actual features met by the everyday practitioner.

Dr. Parker's paper on "Syphilis" elicited discussions which took up almost the entire afternoon, several members debating at length on various points brought out in the essay.

The last paper on the program was by Dr. Albright. His handling of the subject of "Hemorrhoids" is certainly deserving of complimentary mention, being an especially strong defense of a line of treatment at variance with that usually adhered to by the majority of practitioners.

This being election day the following gentlemen were chosen to fill vacancies caused by retiring officers: President, Dr. C. L. Heath; Vice-President, Dr. J. W. Parker; Secretary-Treasurer, Dr. V. V. Anderson.

After arranging for a program for the ensuing meeting the society adjourned to enjoy a little repast which had been provided for physical welfare.

V. V. ANDERSON, Sec'y.

The regular monthly meeting of the *Knox County Medical Society* was held at Barbour-

ville on January 23, 1905. A good representation of physicians was on hand to take part in the first meeting of the new year. Dr. Heath, the newly elected president, took the chair and in a very happy and auspicious manner inaugurated what it is hoped will prove the most successful year ever enjoyed by the society.

Among the clinical cases a most interesting one was presented by Dr. Cecil, of Flat Lick. The day's program consisted of a paper on "Epilepsy," by Dr. Anderson, with a very interesting discussion by the various members. After the discussion of unfinished business the society adjourned to meet on the fourth Monday in February.

V. V. ANDERSON, Sec'y.

The *Monroe County Medical Society* met at Clancey House, Tompkinsville, Ky., Tuesday, January 19, 1905. Drs. Duncan, Bushong, England, Lindsey, Palmore, Sympton, Jones, Ray and Walden were present.

The papers of the day, "Diphtheria," by Dr. Palmore and "Acute Articular Rheumatism," by Dr. Jones, brought out quite a discussion.

The hour's business session at the close was highly enjoyed by all. The meeting was voted unanimously to be the best meeting in the history of the society.

The following papers are on the program for the February meeting:

"Neurasthenia," by Dr. England.

"Gonorrhoea," by Dr. Walden.

Quiz on "Obstetrics," by Dr. Duncan.

E. E. PALMORE, Sec'y.

The *Pulaski County Medical Society* held its regular monthly meeting February 9, 1905. (society meets at night), the following members were present, J. W. F. Parker, G. M. Reddish, B. G. Allen, F. A. Taylor, J. A. Bolin, B. G. Shelton, S. M. Scott and A. W. Cain. The president and vice president being absent, Dr. S. M. Scott was elected president pro tem. The following papers were read and discussed: "Lobar Pneumonia," by Dr. J. A. Bolin; "The Treatment of Typhoid Fever," by Dr. Parker. Dr. Parker has now been practicing medicine for more than fifty years. The care with which this paper was prepared shows that he still believes in careful and thorough work, and that he is fully abreast with modern medicine. A paper was read on "Hemorrhoids" by Dr. A. W. Cain. Our society meets on the second Thursday of each month.

A. W. CAIN, Sec'y.

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(Being the Journal of the Kentucky State Medical Association.)

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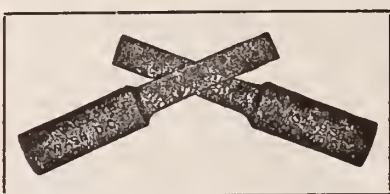
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LOUISVILLE, KY., MAY, 1905.

NO. 12.

THE TREATMENT OF ENLARGED PROSTATE.*

By IRVIN ABELL, M. D., Louisville, Ky.

The frequency of prostatic enlargement, the continuous and, in many cases, severe suffering such patients endure, and the fact that we, in recent years, have seen developed, a procedure that promises relief in many of these cases, is the apology for the presentation of this paper.

There are several points that I wish to present for discussion: first, the general care of the prostatic; second, the determination of suitable cases for enucleation; third, the care of inoperable cases, with their accidents and complications; fourth, the results to be expected in each class.

The general care of the prostatic. When we consider that the enlargement offers obstruction to both urinary and blood streams, with resultant engorgement of bladder lining and wall, thus affording propitious conditions for the entrance of infective organisms, we must conclude that our every effort should be directed toward avoiding infection since this adds immeasurably to the suffering of the patient and eventually means death. To this end we should avoid instrumentation of the urethra as long as circumstances will permit and content ourselves with general hygienic precautions and the administration of urinary antiseptics and sedatives. The man with beginning prostatic obstruction invites trouble by exposure to cold or sudden chilling, by repeated sexual intercourse, or by frequent alcoholic indulgence. He should at all times be warmly clothed, avoid prolonged exposure to inclement weather, long buggy rides and much horse-back riding. If he finds it necessary to urinate during the night he should not go out of his bedroom, which should be kept warm, or if not warm he should provide himself with an urinal that can be used in bed in the recumbent posture. His bowel and skin should be kept active, and his food should be nutritious and as unirritating as possible. By following these precautions his bladder irritation will be kept at a minimum and he will many times avoid acute retention: add to this the occasional administration of urinary antiseptics and sedatives, urotropin, oil of eucalyptus, tincture of

hyoscyamus, and oil of sandal, and our patient, while not comfortable, will be able to live with the least irritation compatible with his disorder, until increasing obstruction or the advent of infection renders necessary the employment of other methods.

With increasing obstruction and an entire absence or minimum of infection dilatation with the smooth steel sound has given more relief in my hands than any other local procedure; treatment is given every fourth or fifth day, using absolute cleanliness, in order to minimize the risk of infection, and employing the largest size sound that can be safely passed without endangering the integrity of mucous membrane of the prostatic urethra and bladder. The majority of patients derive marked relief from such treatment until infection or the distortion of the prostatic urethra due to increased growth forces its abandonment. The precautions to be urged in connection with dilatation are absolute cleanliness and gentleness of manipulation, otherwise we add infection and injury, thereby aggravating our patient's troubles a hundred fold. In the occasional attacks of retention in this early period, a perfectly clean catheter, soft rubber or silk-woven, moderate rest, free saline purgation, and antiseptics internally constitute our plan of treatment until relief is afforded, after which the catheter is discarded and treatment above suggested is resumed. With the occurrence of cystitis, in addition to the above measures advocated in acute retention, we add hot sitz baths, and, in those cases in which the process is not too acute, bladder washing; for this latter purpose a solution of carbolic acid, salicylic acid, and borate of soda is preferred.

The determination of suitable cases for enucleation. The development of a satisfactory operative procedure for the relief of the condition comprehended under the term prostatism, has been a slow one, but the combined operative experience of recent years tells us that this has been accomplished.

The profession was at first inclined to view the operation of prostatectomy with disfavor, but a ripper knowledge has demonstrated its usefulness; we are all agreed upon that at the present time, but are still at variance in regard to the best method of attacking the gland in the course of removal. There is also some difference of opinion as to the oper-

* Read before the Kentucky Midland Medical Society at Shelbyville, Ky., January 12, 1905.

ative indications; the writer does not believe that every individual with an enlarged prostate should be subjected to operation; on the contrary he is convinced that many men with a moderate enlargement, in the absence of infection and marked residual urine, may, by observing the precautions previously outlined, live in comparative comfort to a ripe old age. When the obstruction is progressive, rendering urination so frequent as to induce exhaustion and practically prevent sleep, operative measures should be advocated; again in the following conditions: in the presence of a progressive cystitis; in those cases where the urethra and bladder are so irritable as to prevent instrumentation; in those cases characterized by frequent attacks of acute retention; where the obstruction is so great as to require the frequent or continual use of the catheter; where repeated hemorrhages occur, threatening to deplete the strength and seriously undermine the health of the patient; or where pain is so continuous and severe as to seriously interfere with nutrition; where more than a slight amount of residual urine is present, and lastly in the presence of stone.

Age is no contraindication; my oldest patient, operated upon two years ago at the age of 74, is well and living in comfort to-day. Many successful operations at a more advanced age have been reported. The principal contraindication in the damaged kidney which invariably results when infection is added to the obstruction: such patients have at most but a short time to live, and the immediate danger to life in such cases is so great as to render the operation, in the opinion of the writer, unjustifiable. In cases where marked cystitis has long existed, with the patient in a more or less septic condition, I believe preliminary drainage through a suprapubic puncture is essential in obtaining the best results, both as to immediate danger to life from the operation and subsequent relief of symptoms. Lastly, the general condition of the patient, aside from his local lesion, is to be taken into consideration in determining his ability to withstand such a procedure.

The choice of operative method rests at present largely with the experience of the operator, some preferring the suprapubic, most preferring the perineal, and some few the combined route. My personal experience has been confined to the perineal operation, although I can readily see where the suprapubic route offers advantages in those cases in which the prostatic enlargement is situated high and projects into the bladder. The question must still be regarded as an open one, with the preponderance of opinion in favor of the perineal method as the one of election,

and the suprapubic method as one of selection.

The care of inoperable cases, with their accidents and complications. The dismal picture presented by the inoperable prostatic is a familiar one, and the condition one which taxes our skill to the utmost to render comfort and assistance to the unfortunate victim. General hygienic measures and bladder irrigation constitute the means usually employed, and time and experience have taught us nothing better. Thorough irrigation of these old infected bladders makes the patient more comfortable since it gets rid of toxins and debris, which when taken into the circulation but add to his discomfort and debility; the knee-chest position has been suggested as affording drainage to the bas fond during irrigation, permitting the accumulated urinary products to be dislodged by the force of gravity and to be evacuated with the irrigating solution. The use of the catheter before retiring, in these aggravated cases, by completely emptying the bladder, procures the greatest amount of rest; the catheterization can, if necessary, be repeated during the night by the patient. Where the bladder is very irritable, the use of suppositories containing full doses of extract of hyoscyamus, has seemed to the writer to produce marked amelioration of the bladder spasm in some cases. When acute retention complicates the cases coming under this classification, the condition of affairs presented is at times most trying. The patient being already septic, the temperature rapidly rises, intoxication occurs, and unless drainage is rapidly secured, uraemia closes the scene. Drainage with the catheter, where it can be satisfactorily employed, is to be carried out, combined with elimination through the bowel and skin: in those cases in which the catheter, whether it be soft rubber, silk woven, or metal, can be introduced only with great difficulty, doing violence to the already damaged mucous membrane, thereby increasing absorption of septic products, or in those cases in which they can not be introduced on account of the obstruction or the pain which the manipulation produces, we are forced to resort to drainage through a suprapubic opening: this affords the patient relief during his remaining days, which in the majority of instances, are not many. Suprapubic drainage, before the evolution of prostatectomy, was formerly employed as a routine treatment in cases of severe prostatism, and as a result persistent fistulae were frequently noted. Such a case, in the hands of a colleague, recently came under the observation of the writer; a suprapubic cystotomy has been made four years prior to the time he came under observation,

and as an end result, the entire urine was passed through the fistula, which had contracted to a very small opening, inducing severe and painful bladder spasm and straining; a hernia had protruded through the upper end of the incision and three stones had formed in the bladder, rendering the picture of suffering presented, a pitiful one. In chronic retention, in which there is at all times a considerable amount of urine in the bladder, it is well to evacuate gradually, preferring several sittings in order to avoid the danger of collapse from too sudden emptying of a chronically distended viscus. Repeated suprapubic aspiration for the relief of retention in septic cases is to be discountenanced, since infection of the prevesical tissues follows repeated punctures.

Results to be expected in each class. In the class of cases first considered, those coming under the head of beginning obstruction, many may with proper care and treatment, as we have seen, live out a comparatively comfortable existence. The condition, however, in a large percentage of cases is progressive, and soon presents marked evidences of obstruction, with or without infection, demanding for its relief operation, or in the event of it being declined we are brought to a dependence upon palliative treatment, catheterization and irrigation, for such relief as it may afford. With marked obstruction damaging changes take place in the bladder, ureters, and kidney pelvis; sooner or later, in every case in which the catheter is continuously used, infection occurs, and in a large percentage of cases, traverses the urinary tract with progressive destruction until uraemia or sepsis marks the end. We do see cases that use the catheter successfully for years, but on the other hand we see many more in which the catheter adds the one element needed for their destruction, infection. In those cases accepting the removal of the glandular obstruction we see much to encourage them and much to encourage us: the relief of pain; the discardment of the catheter; the avoidance of retention; the avoidance of cystitis, or in the event of its existence, its disappearance; the ability to retain urine for some hours, and the promise of a lengthened life. Watson in the June issue of the *Annals of Surgery* reports the following statistics: palliative operations—drainage, 146 cases with 49 deaths, a mortality of 3.3 per cent; total removals—perineal, 530 cases with 33 deaths, a mortality of 6.2 per cent; total removals—suprapubic, 243 cases with 28 deaths, a mortality of 11.3 per cent.; this list included cases from all sources; taking those of Goodfellow, Albarran, Proust, Pauchet, and Rafin we have 203 perineal total removals, with 6

deaths, a mortality of 2.9 per cent.; and those of Freyer, Moynahan, and Mayo Robson, we have 69 total suprapubic removals with 6 deaths, a mortality of 8.6 per cent. Taking the more recent lists of Goodfellow, Young, and Parker Syms we have a total of 169 perineal total removals with 4 deaths, a mortality of 2.33 per cent. Fuller says, "My experience with prostatectomy is somewhat over 300 cases. I feel that if cases complicated with very marked uraemia are excluded, I can operate with an average risk to the patient of not more and probably under 5 per cent. Death from the operation itself is practically nil." The question of operating so as to avoid injury to the ejaculatory ducts has been rather widely discussed but to the writer their loss or preservation seems to be of little moment; granting the loss, health and comfort are of more value to a man than they at the period of life at which this condition demands operation. The occurrence of epididymitis in one of my cases after complete removal of the gland, and the similar occurrence in many reported cases seems conclusive proof that the vas deferens retains its connection with the urethra, even after the loss of the ejaculatory ducts. The sexual power, is, in many instances, either diminished or entirely lost; this occurred in all my cases except one, now operated seven months ago, who professes himself as virile as before the removal. No cases of permanent stricture have so far been reported, even after total removal of the prostatic urethra. Occasional instances of incontinence and uterorectal fistula due to accidental injury of the bladder sphincter and rectal wall have been reported; such accidents should be entirely eliminated by a proper technique. Fistula at site of operative wound occasionally persists for some time after operation.

TYPHOID FEVER.*

By DR. FRANK L. LAPSLEY, Paris, Ky.

I desire first to express my appreciation of the invitation through your courteous secretary to be with you on this occasion and amid such pleasant surroundings as are afforded by the beautiful mountain scenery of our Kentucky, a name most dear to the heart of every one here present to-day. And just here, my fraters, pardon me indulging in a little personal reminiscence when I relate that my early, and I may say my first real inspiration and incentive to pursue the study of my chosen profession had its birth at a point about fifteen miles beyond here, when sixteen years ago I was engaged in helping to con-

* Read before Kentucky Valley Medical Association, held at Torrent, Ky., June 16-17, 1904.

struct this railroad which has done so much towards civilizing and developing the vast resources that abound in this section of our State. To be here to-day when all is so changed is delightful indeed, but I must say that after wandering up and down this right of way from Clay City to Jackson for so long, all this grand panorama of sublime scenery ceased to appeal to the romantic side of my nature, and upon leaving I experienced no heart pangs or yearnings ever to return, at least to live.

However, for these mountain people I want to add my tribute of highest regard and respect for their kind and hospitable nature and many noble traits of character, among whom so many of our most worthy doctors are giving their lives of faithful and devoted services and of whose real trials and hardships we "Blue Grass" doctors know very little.

The incident herein referred to was my being called on one morning in an emergency to administer an anaesthetic to a convict in our camp who had sustained a compound fracture of one leg and a simple fracture of one leg and a simple fracture of both bones of the other, the former necessitating amputation in the lower third of the femur.

This was skillfully done by two mountain doctors out in the open air under canopy of heaven with plenty of God's own sunlight. A more perfect primary union and beautiful result I have never seen in any hospital. It was also here in the same environment in an epidemic of typhoid fever, with necessarily very little and no trained nursing, that I witnessed some most marvelous and unexpected recoveries from all the complications of this treacherous disease, as I now recall, except perforation.

This leads me up to my chosen subject, offering no apology for the selection of an old subject, for in my opinion typhoid fever as we see it to-day and treat it to-day is the most interesting disease to the general practitioner.

I do not appear before this intelligent body to advance any especially original ideas or new spun theories as to the etiology, propagation and wide prevalence of a disease that has its habitat from the banks of the Yukon river to semitropical Florida, and from Sandy Hook to the Golden Gate. It is no respecter of persons. No race, no sex, no age is absolutely immune. It attacks the old and young, male and female alike. Like the poor, we have it with us always.

To impress the importance of this subject, it is only necessary for me to state that it is estimated that in this country alone 500,000 people are stricken each year and of this vast

number 50,000 die. I do not doubt there are some doctors present who have as many as 50 to 100 cases in the course of a year. That the infection by the bacillus of Eberth comes from without, is beyond reasonable dispute; it enters the system principally through the medium of water, milk, oysters and uncooked vegetables. As was most conspicuously and strikingly illustrated during our late unpleasantness with Spain, flies proved to be most potent carriers of contagion, causing one of the most fearful outbreaks known which resulted in a greater loss of life than by powder and bullet.

Here I wish to call your attention to a question that is most vital to-day to the world at large, but more especially to our many large municipalities, namely, the relation of sewerage to their respective water supplies, how to remove all possible source of contamination, or at least to reduce to a minimum the danger. The greatest illustration that has come to my personal notice was when in Chicago a few years ago I saw the construction of that great drainage canal on which have already been spent thirty-six millions of dollars. There still exists to-day the opportunity for contamination by the sewerage from a vast area of the city and it is calculated that the expenditure of thirty-two millions more will be necessary before the water can be considered safe.

As has been forcibly stated, the interest on this vast amount of money would almost sterilize the air from each patient. In an interesting paper in one of our recent journals, the writer adduces overwhelming evidence that typhoid fever exists to a proportionately greater extent in the country than it does in the town and that its propagation is in general from the country to the town.

At Johns Hopkins, Baltimore, I am told a routine question to a patient admitted with typhoid fever is: how long have you been in from a suburban village or the country? The danger of contaminating fluids is much greater here than elsewhere by reason of the privy vault being in such close proximity to the well. Water is not the source of all typhoid infection, for proof is certain that only from one case of typhoid is another begotten, and though we have made and are still making rapid advances in therapeutic knowledge, we have not yet a specific treatment; hence to completely stamp out this disease requires the recognition of all cases and the complete destruction of all or most of the bacilli as they leave the patient.

It is probable, as pointed out by Welch, that the infectiousness of water, or any infected material, is proportional to the number of typhoid bacilli it contains. It cannot be sup-

posed that every one who takes typhoid bacilli into the stomach will develop typhoid fever. For infection to occur two conditions must be present—a lowered resistance on the part of the patient and a sufficient number of infecting organisms.

When we see the disease attacking so many strong, healthy and robust individuals, it is very difficult to determine the factors which enter into the so-called lowered resistance, and it is furthermore interesting to note what a wonderful warfare these little bacilli have to wage from the time they leave one patient to entering the next in sufficient numbers to cause infection. Of course the vast majority must die in their struggle with cold, sunshine, and countless other bacilli.

Pursuing further this line of thought in prophylactic measures, there would seem to be three positive ways to prevent infection:

1. Have a water supply from such a source and so guarded that it is impossible for the bacteria to enter it.
2. Sterilize all water before it is consumed by the public.
3. Destroy all bacilli as soon as they leave the patient.

In recent years the widespread prevalence of typhoid fever, as the outbreaks in Ithaca, N. Y., Philadelphia, and other large cities, testifies that even the expensive filtration plants are notoriously uncertain; hence this leaves only one positive method, to compel all people to boil water before drinking. But as a recent writer has observed: "In America to compel is a difficult job." To destroy all bacilli as they leave the patient is a neglected opportunity on our part, and it is plain we do not do our full duty.

Not having the time to enter into all the details in the necessary procedures, I would say simply sterilize the excretions as they leave the patient. This simple prophylaxis becomes insignificant when compared to that of tuberculosis, or the exanthemata. Yet, while we know all these causes and undisputed methods of propagation, we still become apathetic, because very often those in the immediate surroundings of the patient are not ordinarily directly affected; also because of the erroneous teaching that typhoid is infectious but not contagious, for after all the greatest danger of a typhoid patient is to the community at large, and when you stop to consider the chances for infection, the wonder is that typhoid fever is not more prevalent than it is.

In conversation with a distinguished member of our State Society a few years ago we were discussing some anomalous phases that were presenting in some of our cases at that time and he made the remark that he believed the text books on typhoid fever would all have to be re-written. Many times since I

have been impressed that there would seem to be some truth in his prediction and that leads me up to a short consideration of the diagnosis.

In the majority of cases this is not difficult to make, and the clinical picture is easy of recognition, especially if your endemic occurs in the late summer and early fall months, the autumn season, when we have been educated to look for its prevalence. The exception to this rule has become most common and it can and does not infrequently occur in mid-winter and the early spring when our water courses are high and the country thoroughly flushed out. When first seeing a suspected case of typhoid, every doctor experiences the consciousness of that little something that tells him this is typhoid. To this is added the general clinical aspect, the history of malaise, that tired and sleepy feeling, a sense of a gradual rising and falling of temperature, loss of interest in everything that pertains to their well-being, and the Widal serum test. According to Osler, every continued fever north of Mason and Dixon's line not yielding to quinine in a week, can be safely considered typhoid until definitely ascertained to be something else.

Up until very recent years one most common mistake has been the failure to recognize this disease in young children. During the past year I had some cases in children under six years of age that ran a typical adult course. I did not find the symptom so distinctive here as defined by my able instructor in diseases of children, the late Dr. Larrabee, namely, two distinct exacerbations of the temperature in twenty-four hour. The fact that the best clinicians occasionally first make the diagnosis on the autopsy table should not discourage us but rather incite to greater care and more painstaking methods in determining true pathological conditions present and by accurate and decisive use of our powers of observation thereby be the better enabled to arrive at skillful and scientific conclusions.

We recognize as the three cardinal symptoms the peculiar temperature curve—slow ascent, maintenance, then slow descent—the rose-colored rash, the enlarged spleen. To these we add a Diazo reaction in the urine and a positive result of the Widal serum test. The familiar prodromata are headache, pains in back, legs, more often chilliness than a distinct chill, some cough, epistaxis, anorexia, nausea possibly, diarrhea or constipation, the later in my opinion much to be preferred, the onset usually gradual but occasionally sudden.

The typical temperature rises gradually during the first week, reaching 103-105, with morning remission of 1 to 3 degrees. During

second and third week temperature remains high with slighter remissions. In the fourth week morning remissions approach normal, while the evening temperature persists. After this time if there is a persistent slight fever of 1 to 2 degrees I believe it is due to insufficient food, to which I shall again refer. The circulatory system gives an important symptom: the pulse rate is not in keeping with the elevated temperature, as a pulse rate of 86, temperature 104. I have come to regard the rose rash, or the exanthem, as truly pathognomonic, having observed it in 98 per cent of my cases.

Tympanites with diarrhea is a very rare symptom in my experience. The cheeks are flushed and the face has the typhoid stamp with decided mental hebetude. Pupils are generally dilated. The tongue is red at tip and edges with white coating elsewhere. In patients profoundly intoxicated by the toxemia it is apt to become brown, dry and tremulous.

Inasmuch as we are judged by our results, the management and treatment of the subject under consideration are of supreme interest and the laity is apt to take considerable notice of the reputation a doctor may have in his community as a typhoid fever doctor.

Have the sick chamber in a quiet part of the house and freed of all unnecessary furnishings, well adapted to sunlight and free ventilation. The bed should be comfortable with mattress but no feathers, and kept clean. Exclude and keep from the room all except those in immediate charge.

Select and maintain efficient, tender and intelligent nursing, trained or not as the circumstances and surroundings may demand. Some of my most successful cases have been those who were nursed by a member of the family with the assistance of some good man or woman in the neighborhood, and while I recognize that skill and tact are requisite to ideal nursing, it is also a question of physical endurance and the ability of both doctor and nurse to come out even financially. Be firm and explicit in all your directions, in fact it is best to write them out. Be gentle and at all times show that you are master of the situation.

Leave a thermometer, as the average nurse can be taught its use, and have the temperature taken and recorded every three or four hours.

As yet we possess no antitoxin such as we have against the poison of diphtheria, and as we are confronted by a general septicemia the essential principles of management are classed as follows: complete rest, a diet as nourishing as the condition of the patient

will allow, measures to relieve the hyperpyrexia and keep the emunctories active, an ever watchful carefulness for the various dangerous complications. Patients must be kept absolutely in bed and the use of bed-pan must be enforced. If they insist they cannot use it make them learn how.

Have them drink all fluids through a glass tube. I do not now as formerly advocate so strictly an exclusive milk and broth diet, not that I regard the question of diet any the less important, but I think we can adapt our diet to the condition of the patient, especially in those cases with few abdominal symptoms, a reasonably good general condition, and fairly good appetite. A considerable latitude of diet may be allowed and variety is really important in that it prevents the vital powers from reaching such a low ebb and convalescence is more easily, rapidly and satisfactorily established, and with this end attained I firmly believe we are not so apt to have our anxiety kept up by a little persistent low grade of fever, or in other words a starvation fever. Shattuck justly says we must treat the patient not the disease. We cannot blindly practice medicine from text book rules; if we do we have a small conception of our duty to the community in which we live, move and have our being.

I never use any of the coal tar preparations, for the control of fever. The value of water internally, externally and eternally is beyond dispute for promoting elimination, reducing temperature by the sponge or bath accompanied by judicious massage, and its general effect upon the circulation and nervous system. In the care of the bowels I have reached the conclusion that it is not desirable to administer laxatives by the mouth or to interfere any more than is absolutely necessary with the function of the intestine during the course of the fever, and this would appear the rational procedure. I administer enemata every other day in case of constipation, otherwise strictly let the case alone. I advocate and use intestinal antiseptics so called, my preference being the triple-sulpho-carbolates of calcium, zinc and soda, not because it disinfects, sterilizes and antisepticizes the thirty feet of intestines or any part of it, for that is utterly impossible, that is, effectively and absolutely. But they do prevent a certain amount of fermentation in the bowel contents, gas formation, dyspepsia symptoms and an excessive auto-intoxication. It is extremely important that the patient be disturbed as little as possible, for the constant and frequent dosing as advocated in some lines of treatment I believe to be the worst type of meddling therapeutics.

To sum up, then, the essential features of

the treatment of this opportune subject, are rest, diet, bathing and massage, proper nursing, together with watchful, symptomatic and stimulating treatment and careful intelligent observation of the case in order to recognize at the earliest moment the more dangerous complications, this last point being one of great importance in successful management.

ETIOLOGY AND PATHOLOGY OF TYPHOID.*

By V. V. ANDERSON, M. D., Barboursville, Ky.

In assigning me this part of the general topic typhoid, you have given a task no less difficult than interesting. For while to me the pathology and etiology of disease is a beautiful study, to make it so on paper or attractive to even a medical audience is something certainly beyond my capacity. Compared with the symptomatology and treatment it must seem at the best dull and prosaic. So, if I become tiresome and uninteresting, I beg you to bear with me, remembering this part of the subject even in the best hands, can not be made as entertaining as a popular novel. I shall endeavor to bring out in my dissertation at least three points, relating (1) to the wide-spread prevalence and too frequent failure in the recognition of this disease; (2) its varied manifestations, and (3) its absolute prophylaxis. I will merely touch upon the history, for anything like a complete consideration of it would require weeks of research. A Paris physician by the name of Louis first used the term typhoid. It was during a great epidemic prevailing there in the last century, the fever was generally thought to be similar to a continued fever in Great Britain, where in reality typhoid and typhus co-existed. Gerhard, of Philadelphia, a student of Louis, was to have the honor of first making clear the clinical and anatomical distinctions between the two diseases. Bartlett's *Practice of Medicine* was the first in which a separate treatise was considered. Could we write a true history of typhoid one of the darkest pages in medical literature would be presented, believing as I do that for every case of infection some one is responsible, and too often the physician is the guilty party at whose door the accusation may be justly laid. This disease is without a doubt the most common of continued fevers in the temperate zone. Bad drainage, filth, and contaminated water favor the spread and multiplication of the bacillus, while anything that lowers the vital resistance predisposes to its growth and

proliferation in the human organism. But for the existence of typhoid fever there must be present the exciting cause, the bacillus of Eberth; filth, contaminated water, bad drainage cannot cause it, only the germ is the directly responsible factor without which there would be no typhoid. Here does the physician's guilt manifest itself—but of this later.

Sanitation has greatly reduced the mortality in our cities, but in the country and small towns the disease seems to be on an increase, largely due to our own ignorance and neglect of duty. That we fail to recognize it in many instances is an undoubted fact. It is estimated that not more than sixty-five per cent. of the total mortality is reported. However, there is no earthly excuse for our failing to institute precautionary measures in every case that may seem suspicious. Sufficient object lessons have occurred in the past few years to arouse the medical mind to look upon this dreaded disease, that is killing its thousands each year, as an enemy demanding its most active and determined attention.

While not desiring to detract from the great work now being done in yellow fever, smallpox, etc., by our National government, still it is spending its millions on these diseases while at our very door is a more terrible monster than them all, destroying its thousands with impunity and the profession standing by watching its devastation with indifference. I mean that legislation should be accomplished providing for isolation, thorough bacteriologic examinations, and the compelling of attending physicians to use every prophylactic measure possible. But I must get more closely to my subject.

Within the last few years many instructive epidemics have occurred, from which ample opportunity has presented itself for a study of this disease, the Spanish-American war, the South African war, the Plymouth, Philadelphia, Ithaca, Pittsburg, Butler and other epidemics. During our Spanish-American war one fifth of the total number of soldiers in camp were afflicted with typhoid; and, incredible as it may seem, forty per cent. of the cases sent into the general hospital failed of recognition by the regimental surgeons; and these surgeons were good men from every part of the nation, coming as they did from the volunteer regiments. The disease seems to be characteristically a camp disease; when the soldiers are on the march cases seldom occur, while on the contrary, in camp, the disease manifests itself within a few weeks. Camp pollution, filth, contaminated water, dissemination of poison through clothing, etc., flies (there being a regular plague of these during the war referred to, food left

* Read before the Knox County Medical Association, December 26, 1904.

uncovered would almost immediately be black with them), these different factors contributed mainly to the widespread prevalence of the disease. It would be interesting reading to go more minutely into the epidemics affecting the various cities referred to, as well as many others of which no mention has been made. Suffice it to say that in every case it has been traced to the criminal neglect of authorities in charge. Infected water in most cases is responsible with, in some instances, the milk and other food. The Butler epidemic is fresh in the minds of us all, many succumbing to the disease, including physicians and nurses, the neighboring city of Pittsburg being more than likely the responsible offender, as it has for years been a regular hot-bed, disseminating typhoid all through western Pennsylvania, and being a menace to the entire country. Typhoid fever has been well called autumnal fever, as nearly fifty per cent. of cases occur during the months of August, September and October. Pettenkofer has suggested that the condition of the ground water is the important causative factor, localized foci being more readily drained into wells and springs.

Our authorities claim that, in respect to age, it more often affects those between fifteen and thirty, while in early life and old age few cases are reported. This is true, but undoubtedly many cases occur in elderly individuals that are overlooked and diagnosed some other condition. But as to the exciting cause, the bacillus of Eberth agrees with two of Koch's laws, and has been accepted as the actual cause of all the mischief. It is constantly present in the pathologic lesions and grows outside the body in a special manner. However, it has not yet met the third requirement, that of producing the disease experimentally. The bacillus is found in the lymphoid tissues of the intestines, mesenteric glands, spleen, liver, red bone marrow, in the stools, urine, sweat, sputum, blood and rose-spots. In the stools it has been demonstrated in fifty per cent. of the cases and in from twenty-five to thirty per cent. in the urine; hence the supreme importance of thorough disinfection of these excreta. Outside the body the germ may be found in water, milk, on vegetables, etc. It will live in water for weeks; in the upper layer of the ground soil it has been known to exist for eleven months; in feces for months. That it can be conveyed through the air is a possibility which has been admitted, though some observers claim that when in contact with dry air it soon dies. But its dissemination by means of clothing and other articles can not be doubted. However, a most frequent means of infection is as has been before stated, the water and food

supply. I have said that a mistaken diagnosis is often made with regard to this disease, taking it for some other condition. This is many of us have the idea that the fever is many of us have the idea that the fever is caused by the localized action of the germ in the intestinal tract; this is seldom true, being more often due to its action on various internal organs. Hence, we may have cases where the enteric symptoms are most marked, those where they are slightly in evidence, while there may be some with no reference seemingly to the intestinal tract whatever. A case of the latter type I had some few weeks ago; while not positive of its typhoidal origin, its behavior in every respect led me to give a diagnosis of typhoid.

Finally, attention has been called of late to a class of cases whose symptoms, although they clinically resemble typhoid, are caused by organisms standing between the typical colon bacillus and typhoid bacillus in cultural characteristics. Because of this intermediate position the organisms have been given the name of para-typhoid, or para-colon. While much like true typhoid, the disease offers slight difference in that the course is milder and that diarrhoea and hemorrhage are less frequent, although severe hemorrhage may occur. The most suggestive and distinguishing feature is the absence of the Widal reaction. The anatomical conditions are markedly different from typhoid. The lymphatic apparatus of the intestinal tract is entirely free from the swelling and other changes so characteristic of typhoid. The only constant feature found in these cases is the splenic enlargement. Focal necrosis of the liver with parenchymatous changes in the kidneys and shallow dysentery-like ulcers along the intestines constitute the only anatomic lesions. Undoubtedly some of the cases reported as typhoid are, if these claims be true, merely para-typhoid infections; however, we will leave the bacteriologists and pathologists to discuss these matters.

With respect to the pathology in typhoid, a short resume will be sufficient. Along the entire intestinal tract a catarrhal condition prevails, more than likely being the cause for the pea-soup like stools. The specific lesions are found in Peyer's patches, principally in the lower part of the ileum. For the sake of convenience four divisions have been made in the pathology which represents pretty closely the clinical picture of each corresponding week.

First, there is a hyperplasia or swelling of these glands. They become enlarged, elevated and grayish-white in appearance. This proliferation of cellular elements causes a cut-off in the blood supply, producing

anaemia and softening, or necrosis, which corresponds to the second stage, or second week, of the disease. The tissue now sloughs and tends to separate from the periphery to the centre, leaving deep pits or ulcers in the mucosa, which may extend into the sub mucosa, or even muscularis, sometimes perforating this and resulting in peritonitis and death. It is during this third stage, or stage of ulceration, that we are also liable to have hemorrhage by the erosion of some blood vessel. The fourth, or stage of cicatrization and healing, corresponds to the fourth week. When the symptoms are ameliorating and the fever has subsided, granulation tissue begins to form upon the floor of the ulcer, giving it a white glistening appearance; the ulcer begins to contract, and soon there remains nothing but a pit in the mucous membrane. Incidentally this scar-tissue formation may be the source of considerable trouble in later years, giving rise to an atonic bowel, and a whole train of symptoms. The large intestine may be affected in one-third of the cases, the large solitary glands enlarging and softening, but rarely if ever ulcerating. Splenic enlargement is a constant concomitant, usually reaching two or three times its normal size. Rupture of this organ has been reported, and it behooves the examining physician to percuss in this region with care in such cases.

I will not go any further into the pathology, as doubtless my hearers are already becoming tired. One thing I desire to impress, and that is that typhoid fever is a preventable disease; it is only kept alive by the universal indifference and apathy of the medical profession. Take a young student in the laboratory and let him drop typhoidal culture upon his hands and clothing, and he will scrub and disinfect for half an hour; while if in actual practice he spills some urine from a typhoid patient on his hands, little attention will be given to it. In one case he may have gotten ten or fifteen bacilli, while in the other, one million or more. Some one has said that when a patient dies from typhoid fever somebody ought to be hung; one case can only have resulted from some other case, in which strict precautions were not taken.

While I do not maintain that some one should be hung, I do say that if the profession was awake to proper prophylactic measures, typhoid fever would, in a few years, be past history; and it behooves us in the future, in our handling of these cases, to exercise precautionary measures just as we would in smallpox, diphtheria or any other notoriously contagious disease.

Let us see that the stools, urine and sputum are properly disinfected, that all clothing, etc.,

coming in contact with a patient are carefully boiled. Then we will be doing our duty to our patients, their families and the community in general, and I am sure that a clearer conscience and a far healthier people will be the result.

ACUTE ARTICULAR RHEUMATISM, WITH SPECIAL REFERENCE TO ETIOLOGY AND DIAGNOSIS.*

By A. C. WILLMOTT, M. D., Hutchison, Ky.

Notwithstanding the saying that there is nothing new in rheumatism, it may not be amiss to talk over this disease, which we so often meet with in practice. As to the cause, much has been said and it is still classed among the diseases of doubtful origin. As to the germ theory of the disease the different experimenters vary widely in their investigations. Some assert that a micrococcus is constantly associated with acute rheumatic lesions, and is its cause; the same organism is obtained from cases of chorea and when injected into animals generally produces a typical attack of acute rheumatism. The micrococcus was obtained in pure culture in nearly every case and is a very small coccus arranged in pairs and chains. It stains by Grams method and the ordinary methods, and is not capsulated. Without animal experiments it would be taken for the ordinary streptococcus. Other prominent experimenters believe that the staphylococcus is the cause, and Sahli thinks that rheumatic fever is caused by this germ. Other noted investigators believe that the streptococcus plays an important part in causing it.

Achalme has described an organism which is found in the blood of patients suffering from acute rheumatism. It resembles the anthrax bacillus. It stains easily by Grams method and is anaerobic. When injected into guinea-pigs it causes characteristic rheumatic symptoms. Equally noted men believe that a diplococcus is the cause, and while it undoubtedly behaves like an infectious disease we can not lay all the blame on any one organism. Numerous cases have been reported where there is much reason to believe that the disease was transmitted directly. A prominent German physician is convinced to such a degree of the contagiousness of this disease that he has asked that rheumatics be isolated to prevent the spread of the disease. Laying aside the numerous cases where two or more people have been attacked at the same time and where it is clear that the illness of all the patients had a common origin,

* Read at the meeting of the Bourbon County Medical Society, at Clintonville, Ky., in 1904.

we find examples which might lead us to admit the possibility of contagion. Cases are reported where children were attacked a few days after the disease had attacked the father; also, we have Talamons case in which a child was attacked by acute articular rheumatism, which lasted eight days; a few days later a younger sister of the child, who slept in the same room, was attacked by the disease, which proved fatal. And very rarely a husband, apparently very healthy is attacked with rheumatic fever; a few days later the wife also suffers a rheumatic attack, the wife being a confirmed sufferer; and here it seems we have a case to prove the contagiousness of the trouble.

Among the predisposing causes a sore throat or any infected wound plays an important part. The sore throat may precede the attack and is regarded as a point of entrance in some cases. Gehrhard thinks that there is a pathological relation between tonsillitis and rheumatism, judging from the frequency with which tonsillitis precedes it. Age and climate are predisposing causes; exposure to cold frequently causes an attack. Attacks occur more often between the ages of fifteen and forty, and are commoner in temperate climates. The early spring months favor its development, but it is with us the year round. Certain occupations predispose. Work in damp places frequently precipitates an attack. Males suffer more than females. Choreic patients and all whose ancestors were rheumatic are predisposed to the disease.

In rheumatic fever the onset is usually abrupt, though the patient may complain of sore throat and slight fever preceding the attack. Fever and chilly sensations occur. Sometimes one, but usually more joints are affected. The joints of the lower extremities are more often involved than those of the upper. Rheumatic fever is peculiar in that, while a number of joints may be affected, the morbid changes travel from one joint to another, whether they are on the same side or not. The fever, which is seldom higher than 103 degrees Fahrenheit in cases of moderate severity, is irregularly remittant and declines gradually. Perspiration is nearly always copious. Pain is a prominent symptom and is aggravated by the least movement or pressure; the joints are swollen and the adjacent structures, including the skin, take part in the inflammation. This disease affects more than one joint so frequently that where only one joint is involved the diagnosis is a matter of greater difficulty. In rare cases the sternal joints are involved, also the symphyses. In this disease, the joints almost never go on to suppuration and when they do,

the diagnosis should be changed to a mixed infection. Heart complications are common, occurring in fully twenty-five per cent. of all cases. They should be watched for and prevented if possible. At the onset the pulse is full and not very fast; when fast and weak cardiac complications are more apt to supervene, but may occur in seemingly the mildest forms. Blood examinations reveal increase in leucocytes and decrease in hemoglobin. Palpitation, difficult breathing and heart pains are common in this disease. The most frequent complication is acute endocarditis, which frequently leaves a crippled mitral valve. It is indicated by a murmur during systole, which must be over the apex and not counfounded with fuctional murmurs.

This rarely undergoes complete resolution. Pericarditis is next in frequency and is noted by the friction sound and increased area of dullness, triangular in form. Myocarditis appears even less than the former; it always weakens the walls and usually leads to dilatation of the left heart. The reaction of the perspiration is acid and the odor is distinctly sour. The amount of sweating is usually extraordinary. The fever does not bear any definite relation to the sweats. Sudamina frequently occurs. Occasionally we have urticaria, and very rarely cutaneous hemorrhages. In cases of suppuration the fever assumes a hectic type. The fever bears no relation to the cerebral symptoms, lower temperatures being associated with delirium from the start. Hyperpyrexia is always to be regarded as a very serious complication and is frequently fatal. When marked nervous symptoms are present, embolism is to be thought of, following endocarditis. In alcoholics delirium tremens is occasionally met with and coma of renal origin, or otherwise, may develop and result fatally. Chorea is sometimes a complication and a frequent sequel of this disease. Lung symptoms may develop, the inflammation spreading from the heart. The quantity of urine is diminished, acid in reaction and high in color and gravity, with diminished chlorides and slight albumenuria.

The *diagnosis*, which is usually easy, sometimes presents much difficulty. Acute osteomyelitis is sometimes confounded with the monarticular variety. I know of one case where the diagnosis was by no means easy. Still the fact that in osteomyelitis the epiphyses and shaft are involved rather than the joint, aids in the diagnosis. The fever and constitutional symptoms are generally different. Pyemia sometimes simulates it, the difference in temperature, the graver constitutional symptoms in pyemia, will generally clear the matter. The distinction between

gout and rheumatism is usually easy, unless gout shows itself as a polyarthritis. The previous history will help, the tenderness is more marked on the tendons on condyles. In rheumatism the tenderness is more marked on the tendons on either side of the joint. Gonorrheal rheumatism is differentiated by the history and increased local joint symptoms and an absence of cardiac complications. Scurvy, purpura, etc., may be confounded in rare cases.

Before leaving the diagnosis I will mention a case of acute rheumatic fever that came under my observation recently. It started with slight fever and involvement of the maxillary joints with much swelling and local tenderness, and for a while looked like mumps. Later on the profuse sweating and involvement of other joints came on and the diagnosis was changed to rheumatism. It ran an uneventful course and terminated in recovery in three weeks.

As to treatment little need be said. A room even in temperature, free from draughts with absolute rest in bed. The diet should be liquid: milk is to be preferred as long as there is any fever. Stimulants may be needed. Local measures are not to be despised but cannot be depended on. Hot applications are generally better borne than cold ones. Superheated air has been successfully used. Salicylic acid, oil of winter-green with lanolin as a base, makes a good application under a cotton batting or flannel bandage. Methyl salicylate is good; splints are sometimes necessary. As to internal remedies, one of the salicylates or some combination of them meet the indications best. They are employed almost universally. Sodium salicylate is the salt most widely used and that derived from the oil of winter-green has replaced the syndetic salt. This is best given in solution, in small doses every two or three hours until the patient is saturated, and the pain and local symptoms subside. It is claimed for the ammonium salt that it is less depressing, more soluble and more rapidly absorbed. Salol is used considerably. The good effects seem to be from the salicylic and other acids into which it is converted. In case the sodium salt disagrees, the ammonium or strontium salt should be substituted. Salophen gives good results and can be used when gastric disturbances begin. Salicin and oil of winter-green are much used internally. Sodium salicylate enemata may be used in an emergency. Aspirin is very efficacious in most cases. The alkalis should always be used in conjunction with the salicylates. Citrate of potassium and bicarbonate of sodium are the best. Sufficient should be given to maintain the alkalinity of the urine.

Alkalies have little effect on fever and pain but seem to lessen cardiac complications.

In this paper no attempt has been made to deal with this broad subject at length. The complications are barely mentioned and its relation to children has not been touched on.

RHEUMATISM.*

By H. A. ELKOURIE, Nashville, Tenn.

Rheumatism is an acute febrile disease, characterized by fever, pain, and swelling. You observe that I have omitted the word contagious simply because it is not yet definitely understood that this malady is contagious.

Fortunately this disease does not result in death often, but it lays the foundation for so many fatal diseases that I believe it should be classed second to tuberculosis.

It is the purpose of this paper to show the most satisfactory treatment for this disease. A few words with reference to the etiology, however, would not be amiss, as we largely judge the treatment by the etiology.

Heredity and exposure play an important part in the causation of rheumatism as we all know. Up to this hour it has not been universally accepted that rheumatism is produced by a specific germ. The researches of Westpahl, Wasserman, and Malkoff (1) have added very material and palpable increase to our knowledge of the etiology of rheumatism, and it seems that a step farther only is all that is required to land the profession where it will unanimously proclaim that rheumatism is a microbic affection.

These authors obtained a micro-organism from the cadavers of persons who died of rheumatism complicated with endocarditis, which when injected into the blood stream of animals produced rheumatic symptoms, viz: swelling of joints, pain, and fever. This microbe retained its pathogenic properties for four and a half months.

In addition to this Poynton and Paine, (2) have made a very interesting and valuable contribution to the causation of rheumatism. These earnest and untiring investigators have found in eight successive cases of rheumatism a diplococcus which grows in chains in a liquid medium. A mixture of milk and bouillon rendered slightly acid by lactic acid was found to be the best medium to grow the germ in. Rabbits that were infected with this germ by subcutaneous injections, developed rheumatism with all of its characteristic symptoms, and from these rabbits the

* Read before Southern Kentucky Medical Association, October 26-27, 1904.

same diplococcus that they were infected with was obtained.

It seems that this was sufficient evidence to justify the medical world in asserting that rheumatism is a disease due to a specific germ; but here comes a class of authors who are occupants of the best seats in the medical hall, men whom the profession relies upon, and they tell us that rheumatism is caused by increased acidity of the blood and urine, produced primarily by abnormal occurrences in the metabolic changes of the body and secondly by an abnormal increase in lactic acid, which produces the swelling, the pain, and the toxic symptoms in general. Among those who advocate the germ theory the question is: what kind of germ causes rheumatism, rather than what is the cause?

Let the cause be what it may, there are few facts known to every practitioner of medicine.

First: We know that in rheumatism we invariably find increased acidity in all the secretions of the body.

Second: Almost always there are very pronounced disturbances in the process known as metabolism, and in view of these facts it occurs to me that the first thing we should think of in the treatment of rheumatic or gouty troubles should be alkaline remedies in extremely large doses in order to reduce the abnormal acidity of the secretions and excretions.

The salicylates of course are to be classed as very important in the treatment of rheumatism, but recent investigations go to prove that the salicylates are valuable only to reduce the pain and thereby give nature a chance to rid herself of the toxic materials which accumulate in the system as a consequence of rheumatism. We all know that the salicylates are far from being specifics for rheumatism, because how many are there of us that have not failed with them time and again?

To my personal knowledge the great majority of the profession ignore the alkaline treatment to a surprising extent.

If this disease is due simply to increased acidity produced by abnormalities in the metabolic processes, alkalies are sufficient to accomplish a cure. On the other hand, if a specific germ is the primary cause, then a drug or some other something that would destroy the vitality of the rheumatic germs, the ideal treatment.

With your permission I will submit two cases that will illustrate very clearly that alkaline remedies to reduce acidity, and heat to destroy the vitality of the rheumatic germs, are the most efficacious remedies at our command; and let me state that I believe that

rheumatism is produced by a micro organism.

CASE I. H. B., 16 years of age, native of Syria, was taken with rheumatism in the winter of 1904. For a period of six months he was more or less a constant sufferer. He received for treatment hot baths and large doses of the salicylates; at times he would seem better and then again worse. In the spring of 1904, at the suggestion of a Chicago physician, I put him on the following treatment: Equal parts of benzoate, and phosphate and tartrate of soda, with directions to take a tablespoonful every morning before breakfast in a glassful of hot water and also a prescription made up as follows: Potassium iodide, sixty grains; salicylate of soda, six grain; digitalin, one grain; ext. prytolacca, thirty grains, and colchicum, one grain; divided into thirty capsules, one to be taken three times a day.

By the means of a dry hot air apparatus this patient was subjected for thirty minutes to from 175 to 325 degrees F.

After twenty days' treatment he was discharged well, and up to this time he has never had a return of any of the symptoms of rheumatism.

CASE II. Age 20 years, likewise a Syrian, well developed and mainly history good. This patient developed a very violent and painful case of rheumatism after a cold bath preceded by being very hot, as a result of packing a load of goods for two miles without resting. This case came under my observation on the 29th day of last April at Nashville. When patient was first seen his condition was pitiable. He could not bear for any one to walk across the floor, neither could he arise out of bed to discharge his excretions, as a consequence of which a bed pan had to be used.

He was placed on the same treatment outlined in the previous case, minus the superheated air, which was instituted nine days afterwards when patient was able to walk to the office on crutches. On the first day of last June he was discharged well and up to this time he enjoys perfect health.

These results with the use of the superheated air at my hands certainly justify its continuance.

(1) Berlin, Klin. Wochen. July 17 P. 638, 1899.

(2) Lancet, Sept. 22nd, 1900.

ADENOIDS IN THE NASO-PHARYNGEAL SPACE.*

By M. F. COOMES, A. M., M. D., L. L. D.,
Louisville, Ky.

The frequency with which the naso-pharyngeal space is blockaded, or obstructed by what is commonly known as adenoids can hardly be estimated, nor can it hardly be appreciated. That a very large percentage of children have these adenoids in the pharyngeal space cannot be denied, and with these facts before us it can readily be understood that every one of these children who have the naso-pharynx filled with these adenoid vegetations must of necessity be a mouth-breather. Under such circumstances it is readily understood that these children are very liable to have what is commonly known as nasal catarrh, but which is in truth not a nasal catarrh, the existing condition being due to the inability of the child to breathe through its nose and pharynx. This impeded or obstructed nasal respiration results in certain inflammatory changes brought about by the congested condition of the membrane which in time results in imperfect functioning of the mucous glands in the naso-pharyngeal space. The removal of the adenoids, or clearing of the naso-pharyngeal space, results in recovery.

Nothing is more unsightly than an open mouth in an adult, and nothing is more unsanitary in any person than to keep the mouth constantly open. It affords a ready avenue for the ingress of dirt, dust and germs of every description and kind; and since it is a well known fact that the germs of tuberculosis are air borne, it makes it doubly necessary that we should inhale through the nostrils, thereby reducing the danger of taking up the infectious germs to a minimum, as they would be much more liable to perish before reaching the lung by passing through the nose than by passing through the mouth.

Again, it is a fact that children are much more liable to contract diphtheria than adults, and I believe that the reason for this is that children, as a rule, keep open mouths, and take up these germs when adults would not be liable to the same danger because of keeping their mouths closed.

Mouth breathing is very largely a habit for which somebody is to blame.

If it be an adult, the individual is to blame; if it be a child, the father and mother, or others that have special supervision over the child, are to blame, it being understood that in all these cases there is no obstruction

in the nose and that nasal respiration is possible and without discomfort, and that the mouthbreathing is simply a habit which has resulted from carelessness or ignorance as to the importance of nose breathing. In the cases where nasal respiration is impossible, then mouth breathing is a necessity; investigation of the nose and pharynx is then demanded, and if obstructions are found they should be removed sufficiently to enable the patient to breathe through the nose comfortably. One of the most common nasal obstructions is due to the relaxation of the membrane covering the turbinated bodies. This membrane is also frequently found in a hypertrophic condition, but in a great majority of nasal obstructions it is due to simple relaxation of the membrane covering the inferior turbinated bones.

This lexation is not found persistent day in and day out, but is more prominent in the night than in the day. At night the recumbent position, with the influence of gravity, makes the membrane much more liable to become relaxed and engorged, when the tissues become erected as the result of position, or the change of atmosphere. The nasal breathing is always more difficult in a close, warm room than with a moderate temperature.

Where there is a genuine hypertrophy, the tissue refusing to shrink up to any great degree under the influence of adrenalin, then it will be necessary to remove a sufficient amount of the tissue to give good breathing space. Where there is simple relaxation and the tissues blanch out readily under the influence of adrenalin, then superficial cauterization with the electric wire will be sufficient to contract the tissue enough to give good breathing space. The deep burning is unnecessary and painful, and produces cicatricial tissue which often leads to very great discomfort, because the secreting surface has been destroyed, and inspissated mucous and other debris will accumulate on the scar surface, and in that way make it unpleasant to the patient, sometimes producing ozena. The patient should be kept under observation for quite a while, and if the shrinkage is not sufficient after ten days, or two weeks, the burning may be repeated again, and even three or four times if necessary, at intervals of ten days or two weeks. Where you have such obstructions as spurs of bone, deviated septums and polyps, these things should be removed.

Last, and by no means least, comes the obstruction due to adenoid vegetations or growths in the naso-pharynx. Aside from the eruptive diseases nothing is a more fruitful source of inflammations of the eustachian

* Read before Southern Kentucky Medical Association, October 26, 1904.

tube and the middle ear than adenoids in the pharynx.

Dr. Braden Kyle, in his excellent work just published, says that in at least 90 per cent of cases of adenoid vegetation there is involvement of the eustachian tube, with deafness in a varying degree.

The writer's experience, and that of almost every other critical observer, can bear testimony to the truthfulness of the statement made by Dr. Kyle concerning the presence of adenoids in the pharynx. In addition to the involvement of the ear the defective respiration, that is, mouth breathing, is accountable for many of the ailments of childhood. The imperfect condition in which the air passages into the lungs makes them ill developed, the children become round shouldered and dwarfish in their general make up, are usually bad sleepers, and are anemic and unable to stand the ordinary amount of fatigue that children in moderate or good health should be able to bear. As before stated, I think there can be no doubt that this mouth breathing is accountable for many children being tuberculous, because, with their open mouths and low stature, they are in an atmosphere more liable to contain the germs of tuberculosis than is the adult, whose breathing apparatus is two and one-half to three feet above that of the ordinary child.

Nearly all of these so-called cases of nasal catarrh met with in the child, and those in adults, are nothing more nor less than cases of obstructed post nasal spaces. With this understanding of the pathological condition, the method of treating all of these cases is very readily understood. The thing to do is to free the post nasal spaces from adenoids, or any other obstructions that may exist.

If the obstruction is due to the presence of adenoids clearance is readily accomplished by curettage, which is not painful, and which may be done under the ordinary anaesthesia produced by cocaine. Just here I wish to enter my earnest protest against the use of a general anesthesia of any kind in the removal of adenoids from the post-nasal space from children or adults. First, and most important of all, the operation is not painful if the parts are put under the influence of cocaine. Second, there is a great deal of time saved by the non-use of the general anesthesia. Lastly, but not least, the general anesthesia has its dangers and is troublesome, and some times very ugly results follow its use, and the operation is not of sufficient gravity to demand this course, and for that reason I do not feel that we are warranted in

giving anesthetic for the purpose of removing adenoids.

Of course, children will make a great fuss under any circumstances, and invariably say to the parents, or those interested in the child, that they make a fuss any way. During my whole professional career I have never given a general anesthetic for removing adenoids from the pharynx of a child or any other person. After the curetting has been performed, it is well to spray the nose out four or five times a day with normal saline solution containing from five to fifteen drops of carbolic acid to the ounce. The child may also use a gargle of the same material, or any other antiseptic solution that is convenient. In a few days the child has entirely recovered from the effects of curettage, and in a short time will breathe through its nose if that organ be in condition, and in nearly every instance there will be a great improvement in the general health after curetting the pharynx. It is also well to give an iron tonic of some kind or other, so as to start the patient on the up grade, and if there is much debilitation an emulsion of cod liver oil will often prove very beneficial. It is a very rare thing that any of these children will need the attention of a specialist for more than a week. I frequently curette them and send them back to their homes in the country, and never see them again. I have almost invariably had excellent results to follow this plan.

If other obstructions exist in the nose or pharynx, they should be removed so as to make nasal respiration possible.

PROGRESS IN GENERAL MEDICINE.

Under charge of J. A. FLEXNER, M. D., Louisville, Ky.

[From the Journal of Experimental Medicine, Vol. 7, No. 1, Feb. 25, 1905. The Changes in the Heart Rate and Blood Pressure Resulting From Severe Hemorrhage and Subsequent Infusion of Sodium Bicarbonate. By Percy M. Dawson. From the Physiological Laboratory, Johns-Hopkins University.]

Dawson begins his article by a quotation from Howell's study of the phenomena of shock as follows: "Injections of alkaline solution of sodium carbonate intravenously, or in the rectum during shock, increase markedly the amplitude of the heart beat and bring about a rise of arterial pressure. When the shock is moderate (aortic tension 60-70 m. m. Hg.) the injections may restore arterial pressure to an approximately normal level. When the shock is severe (aortic tension 20-40 m. m. Hg.) the injections may increase the arterial pressure by about 100 per cent, and for long intervals, and the effect when it

wears off may be restored by repeating the injections. The effect of the injection is due chiefly or entirely to a direct action on the heart."

The author has conducted a very painstaking and elaborate investigation into the conditions of shock resulting from hemorrhage. The experimental animals were dogs, and his results have in the main borne out Prof. Howells' statement. The possible clinical value of these studies is certainly great. That we have in sodium carbonate and bicarbonate in dilute solutions 1-2 per cent, sodiate bicarbonate to an 0.8 per cent, salt-NaCl solution—a powerful cardiac stimulant, when used as the author directs, is a rather astonishing piece of information and one capable of a wide range of usefulness. The clinical value is summed up by the author as follows:

"Nevertheless, the results of the experiments described above indicate that under certain conditions the addition of the bicarbonate to the infused fluid may be expected to have a beneficial action. In extreme cases of that variety of shock, which is due to loss of blood, the addition of 1-2 to 1 per cent. of the bicarbonate to the solution of 0.8 per cent., of sodium chloride may be of advantage in two respects. In the first place, the rise in all the pressure but especially in the diastolic pressure, is more pronounced than when pure chloride is used, and consequently the circulation (so far as the pressures are concerned) can be restored more nearly to the normal condition. Secondly, the quantity of fluid required is smaller than is the case with pure chloride, and hence the greater is the rapidity with which the solution can be hurried into the circulation, a matter of some importance in desperate cases. There is, however, one possibility which ought not to be overlooked in the employment of bicarbonate, namely that of overworking the heart. Some experiments of a series not yet completed, show that very strong solutions of sodium carbonate and bicarbonate act as cardiac stimulants to a degree which is simply astounding and it is probable that such solutions as were used in the above experiments act in part, perhaps, chiefly upon the heart, as suggested by Howell. It would therefore be the duty of the physician to decide in each case whether a cardiac stimulant is, or is not contraindicated. It would seem to the author to be a rational procedure to begin an intravenous infusion with a solution containing bicarbonate and in this way hurry the pressure upward, so to speak, and then when the pressures had reached a considerable height the bicarbonate might, if thought advisable,

readily be omitted from any subsequent infusion which might be required to maintain the pressure at the desired level." It is difficult to estimate the therapeutic value of such studies as the above. The possibility of use which the studies suggest is very alluring. The constant presence of a solution of these salts in the operating room, where facilities for intravenous use are ready and where its use may be necessary at any moment, will at once suggest itself to the surgeon. That the same results are obtained by the rectal use of the bicarbonate-saline solution will place within the general practitioner's hands a cardiac stimulant of no mean power and without the dangers and disadvantages that attend the use of digitalis, etc., either by the mouth or hypodermically.

The further studies alluded to in the original paper will be awaited with much interest.

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[From the Deutsche Medizinische Wochenschrift, No. 12, March 23, 1905.]

CLINICAL OBSERVATIONS AND EXPERIENCES WITH ROEMER'S PNEUMOCOCCUS SERUM IN CROUPOUS PNEUMONIA.

By DR. KNAUTH, Surg. 9th Inf. Reg., Wurzburg, Bavaria.

The author calls attention to the well-known observation of Fraenkels that experimental animals which have survived an infection with the diplococcus lanceolatus are, for a time at least, practically immune to large doses of this microorganism. The serum used in his seven cases is produced by Merck, of Darmstadt, and is a polyvalent serum. This serum has been in use in Wurzburg for three years in all the pneumococcic infections of the cornea and a marked influence for good is obtained in a large per centage of corneal ulcerations of this origin when the injections are begun in time. The clinical history of seven cases of pneumonia is given. The first case was a very severe one and under ordinary circumstances would probably have been a fatal case. All recovered and the author concludes that in many ways the course of the disease is favorably influenced by this serum. The fever, the pulse, the color, the character of the expectoration and the general condition were so markedly bettered that the later cases requested the use of the serum because of the praise of the earlier ones on whom it had been used. The best records are in the last case where it was used promptly and in this respect it seems comparable to the diphtheria antitoxin. If further use confirms these observations and results,

another great addition to therapeutics will have been made.

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[From the Journal of the American Medical Association, Mar. 25, 1905.]

LEUKEMIA—THE ULTIMATE FAILURE OF THE
ROENTGEN RAYS AS A THERAPEUTIC
AGENT.

By EVERETT J. BROWN and CECIL M. JACK, Decatur, Ill

The authors state that about a year ago they reported a case of spleno-medullary leukemia symptomatically cured by the Roentgen rays. Since then the case has died and come to autopsy and they report the autopsy findings which are of great interest and possibly indicate that in this disease the X-ray treatment is capable of harm while doing apparent good. The authors reviewing Heinke's experimental work, conclude that "undoubtedly the X-ray has a selective action, apparently affecting tissue undergoing pathologic hyperactivity and causing degeneration and necrosis of such tissue." However, the damage done is apparently greater than the good. Dr. Warthin, who studied the organs and who found a most interesting renal condition, sums up the pathologic findings as follows: "If any conclusion is warranted from the study of the specimens it would seem that the X-ray treatment has resolved the leukæmic condition into an aleukemic state, but that the essential disease process, as evidenced by the condition of the lymph glands, is still active. The leucocytes have been removed from the general circulation and from the areas of infiltration, the spleen presenting the characters of a chronic fibrosis. The part played by the latter would appear to be secondary. The remarkable condition of the kidneys offers room for some speculation as to the source of a toxin. Such might result from the destruction of enormous numbers of leucocytes." This case from the medical side reads much like the surgeon's remark that while "the operation was a success, the patient died."

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[From the Journal of Experimental Medicine, Vol. 7, No. 1, Feb. 25, 1905.]

ON THE RATE OF ABSORPTION FROM INTRA-
MUSCULAR TISSUE.

By S. J. MELTZER and JOHN AUER.

From the Rockefeller Institute of Medical Research.

Meltzer and Auer state that the rate of absorption from muscles has never been scientifically studied. The use of intramuscular injections of mercury began in the 80's, because the subcutaneous injections gave rise to abscesses, pain, etc., but the statements made

by certain authorities that absorption from muscles is slower than from the subcutaneous tissue seems erroneous and the authors state that with the substances they have so far studied, "the effect of an intramuscular injection stands nearest to that of an injection into the circulation and is above that of a subcutaneous application." These substances include adrenalin, curari, fluorescein, and morphine. The experiments with adrenalin, curari and fluorescein strikingly demonstrate the above statement, but for practical clinical bearing the results of the experiments with morphia are of more importance. To each of four rabbits 8 milligrammes per kilo. of body weight of morphia sulphate were administered. A and B were given intramuscular injections; C and D subcutaneous injections. Within a few minutes A and B were under the narcotic influence of the morphia, while C and D showed as yet no effect. "Thirty or forty minutes later the difference between the groups is still marked, the respiration in the intramuscular group still slower. An hour later the difference between the groups is not much in evidence. Four days later after complete recovery of the animals the order of the experiment was reversed. A and B receiving subcutaneous injections, C and D the intramuscular ones. After eight minutes C and D were somnolent, A and B scarcely affected, and twenty-four minutes afterwards all the animals were put on the floor. A and B hopped off to a corner, C and D remained on the spot where they had been put in a droopy, somnolent condition." The clinical bearings of these results require no comment.

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[From the American Journal of the Medical Sciences, April, 1905.]

THE DIETETIC USE OF PREDIGESTED LEGUME
FLOUR, PARTICULARLY IN ATROPHIC IN-
FANTS: WITH A STUDY OF ABSORP-
TION AND METABOLISM.

By DAVID L. EDSALL, M. D., and CASPER W.
MILLER, M. D.

The authors state that this work was done to test "the possibility in infants that have persistent difficulty in digesting milk proteids, of administering a useful quantity of vegetable proteid in a form suited to their digestion." The "results have shown the feasibility of successfully administering vegetable proteid to infants in considerable amounts and for at least a fairly long period." They also suggest that the favorable influence upon nutrition observed in a large proportion of cases is more largely referable to the character of the proteid used than to the amount, though this latter point, the authors

admit, is not yet fully demonstrated. The flour used was produced from white kidney beans by grinding and bolting. The bean flour mixture contained ten per cent. of the flour and was prepared by making first a stiff paste of the flour with a thinning out by the addition of the remaining quantity of water, then heating for fifteen or thirty minutes at a good heat in a double boiler, with constant stirring. The resulting thick paste is then cooled to between 60 and 70 degrees C. and the ferment, usually cereo or maltine, is added and allowed to act for about ten minutes under constant and thorough stirring. In a few minutes the mass becomes a rather thin soup and in order to stop the action of the ferment it is brought to the boiling point. It is then cooled and is ready for use. The authors state that his bean flour is somewhat less in nutritive value than a 3.6.1. milk mixture, and if a child was receiving 48 ozs. of the above named milk mixture it was reduced to 36 ozs. and 15 ozs. of the bean flour mixture added; or the bean flour mixture may be added in desired amounts to the milk mixture at the time of feeding. The authors summarize their results about as follows: Bean flour in which the starch is predigested by means of a diastatic ferment, seems to be well digested and absorbed by infants and adults. An extremely concentrated food may be given in this way in fluid and partially digested form; a 20 per cent. solution, although fluid, is practically equivalent to beef steak in nutritive value. Its influence upon the digestive tract in infants in the cases studied was usually distinctly favorable, and its influence upon metabolism in infants and adults is at least equal to that of milk. Of fifteen infants treated, one did not gain; one gained rapidly, but had an intercurrent illness and the flour was stopped; one gained nine ounces and then almost ceased to gain. The others gained as follows: one, fifteen ounces in six days; one, thirteen ounces in six days, both continuing after the bean flour gave out; one, one and a half pounds in sixteen days; one, one and a half pounds in twenty-three days; one, one and a half pounds in seventeen days; one, over two pounds in four days and after readmission, twelve ounces in eleven days; one, four ounces in three days (then taken home); one, one pound in seven days; one, one pound in eight days; one, one and a half pounds in three days. All these were atrophic infants that had been previously stationary, or losing. A child of two years that had persistent and very dangerous disturbance of digestion with advanced malnutrition, improved immediately, the digestive tract became nearly normal within a few days, and the child repeatedly gained over two

pounds a week. The last mentioned child took nothing but the bean flour solution; the infants usually took about 2.1-2 per cent. of bean flour in milk modification. In conclusion the authors state that while infants take the bean flour well in milk, that for adults some form of flavoring is desirable.

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[From the New York Medical Journal and Philadelphia Medical Journal of December 17, 1904.]

SCARLET FEVER IN NEW YORK, AND SOME OF ITS THERAPEUTICAL POSSIBILITIES.

By A. SEIBERT, M. D.

Dr. Seibert's studies of scarlet fever in New York City include not only its annual incidence, but its distribution. The first part of this article is limited to this and he comes to the following conclusions, which are doubtless as true for other large centers of population, and which are important in the prophylaxis of the disease: (1) Scarlet fever always present in New York, is evenly distributed each year among the different districts in direct proportion to the number of inhabitants. (2) It is most common among school children. (3) The chief common centers for contagion are the schools. (4) Direct contact is necessary for infection.

The second part of the article is devoted to the therapy of the disease. The author evidently regards it as due to a streptococcus and seemingly ignores Mallary's and Dunham's recent work indicating a possible protozoan cause. The purpose of his treatment is to combat the streptococci in the skin and in the pharynx. For the first he uses a 5 to 10 per cent. ichthyol and lanolin ointment and evidently lays great stress on the use of lanolin. In the pharynx he uses a 50 per cent. resorcin alcohol solution, and he claims that, "*this solution penetrates through the exudate and deep into the affected mucosa and then destroys the life of every streptococcus (or any other germ) it comes in contact with.*" This treatment he claims has been very effective and harmless.

NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.

Dr. Livingston Farrand, professor of anthropology at Columbia University, has been named as head of this association for the current year.—N. Y. Med. Jour. Jan. 28, 1905.

BOOK REVIEWS.

THE SELF CURE OF CONSUMPTION WITHOUT
MEDICINE, ETC.

By CHAS. H. HANBY DAVIS, M. D., Ph. D.

Published by E. B. Treat & Co., New York.

This little volume is deserving of a wide popular circulation. Its contents, it is hoped have largely reached the profession through other channels. Where the latter is not the case the facts embodied in Dr. Davis' monograph ought to be part and parcel of the general practitioner's knowledge and they are well stated in an easily comprehended way in the little volume before us. When we stop to consider the activity of the "patent medicine man" with his endless "sure cures" for tuberculosis, which claim all experience negatives, the need for just such books as this is apparent. How much the medical profession is itself to blame for the loss of life caused by too much dependence on various "specifics" for this disease is difficult to determine, but that in the light of modern phthisiotherapy dependence should be placed upon fresh air, sunlight and good food in plenty, is easily proved. Dr. Davis includes an extended dietary such as is in use in many sanatoria, which is an important feature of the work. The volume is pervaded by a spirit of hopefulness, the result of close study of the results of the open air method of treating consumption, and as stated in the outset may well be put into the hands of consumptives, their families and the public generally.

J. A. FLEXNER.

* * * * *

BLOOD PRESSURE, AS AFFECTING HEART, BRAIN,
KIDNEYS AND GENERAL CIRCULATION.

By LOUIS FAUGERES BISHOP, A. M., M. D.

Published by E. B. Treat & Co., New York.

Among the more recent applications of research work to practical medicine nothing, in the reviewer's opinion, is of more importance than the correct understanding of the subject of arterial tension. Dr. Bishop's monograph on this subject is timely and clear and will well repay the time and study necessary to do it justice. He well says that what the modern study of tuberculosis means for the young, the study of the effects and remedy of high arterial tension, or rather hypertension, signifies for the aged; and it means much to conserve the experience and wisdom of sixty strenuous years and to add if possible further years of health and comfort to the sexagenarian. The old saying that "a man is as young as his arteries," is about to be paraphrased into, "a man is as old as his arterial tension," because we know now from the

studies of Von Bosch, Gaertner, Janeway, Wigman, and many others that the condition of high blood pressure does not necessarily mean arterial sclerosis, but that the latter pathological changes in the vessel walls may result from the long continued action of the toxic material in the circulation, which in the first place gives rise to the vascular spasm or increased tension of the vessels. The indications for meeting these conditions and the practical therapy of Dr. Bishop's book abound in good sense and we cannot help but wish that the author had extended his monograph by the addition of a chapter on some one or more of the mechanical methods for accurately determining the degree of tension, rather than rely upon the sense of touch as the means of diagnosis of a condition which is so easily rendered into figures and which express so much more than adjectives.

J. A. FLEXNER.

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DISEASES OF METABOLISM AND NUTRITION.

By DR. CARL VON NOORDEN-FRANKFORT, A. M.

Translated by Boardman Reed, M. D.

Published by E. B. Treat & Co., New York

I. *Obesity.* To those who have followed Prof. Von Noorden's work especially his *Pathologie Der Stoffwechselehre*, and his writings on diabetes, these little volumes will be heartily welcome. No writer so thoroughly imbued with the analytical spirit of the German university has made, it seems to us, as happy a combination of this spirit with practical clinical medicine as Von Noorden, and the broad lines upon which he handles the subject of obesity in itself and in its relations to circulatory, renal and pulmonary diseases, to gout and rheumatism, make one wonder how really so much of value can be concentrated into so small a volume. The subject matter does not lend itself to mere abstraction, but this volume and its companion on nephritis, are deserving of a place in every doctor's library.

II. *Nephritis.* No clearer or more directly useful publication on this important subject has come under the reviewer's notice. At every stage of the treatment of the various forms in which nephritis manifests itself, the results have been checked by the most careful studies of tissue as well as food metabolism. Necessarily many parts of these studies are still subjudice. But the author has struck out boldly from the old beaten track and his road is strewn with "uric acid wrecks," red meat and white meat in exploded bubbles and even the fetich of a pure milk diet and excessive water drinking are dealt such body blows that survival is only possi

ble in heads utterly impervious to a new idea.

The key-note of Von Noorden's treatment of the various forms of nephritis, and more especially the acute varieties, is the protection of the kidney from unnecessary strain or work. It is the application of the principle of rest to an inflamed structure, which is so useful in other departments of practical medicine. As illustrative of this plan he arranges the excrementitious, products of metabolism, into two main divisions; the first being such as are eliminated with difficulty; the second, those substances which are well excreted. These tables may well serve as the basis of the dietetic management of these conditions and to one with any experience in this class of patients, the conviction that the dietetic management is one of the most important steps to be considered, must surely obtain.

Throughout the whole of this and its companion volume, the results of a large clinical experience interpreted with a cool analytical judgment, are in evidence and if little medication is advocated it is because of the significant fact that these cases require little or no medicine when the hygienic and dietetic treatment are well planned and carried out. It is to be hoped that these little volumes will secure a large circle of readers and followers, for it is along just such lines as this that the practice of medicine will become a science, instead of a rule of thumb empiricism.

J. A. FLEXNER.

* * * * *

THE BLUES (SPLANCHNIC NEURASTHENIA)
CAUSES AND CURE.

By ALBERT ABRAHMS, A. M., M. D., Etc.

Published by E. B. Treat & Co., New York.

That Dr. Abrahms has read widely, thought deeply and published a useful book, is admitted freely. That he has proved his case will be undoubted by many who have had much experience with this troublesome class of cases. It may be even asking too much of an author to prove his cases in the legal sense, but without it, what reason for another book on this rather hackneyed subject. The writer has seen these cases get "so-called" well under various forms of treatment; has seen them fail to get well in spite of treatment and, when some provoking causes were removed, seen them get well without any treatment worthy of the name. The inherent difficulties in all such conditions is to know how much of the case to attribute to the person of the doctor, to the particular treatment he

advises without reference to his personality and the natural tendency of many of these cases to get well or better without much skilled help of any kind.

The author's summaries and references are full of good sense and if this book can be the medium of transferring some of this good sense into the crania of those poor creatures, through the medium of their professional advisers, it will have justified its publication, whether the relaxed splanchnic circulation be cause or result.

J. A. FLEXNER.

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Gynecology—Medical and Surgical Outlines for Students and Practitioners,—By Henry J. Garrigues, A. M., M. D., of New York. J. B. Lippincott & Co., publishers, Philadelphia.

This is a brief but most excellent work; the general division covers in an acceptable manner the etiology, examination, and general treatment of the disorders peculiar to women, with practical chapters on the bloody and mucous discharges from the genitals. The special division possesses a very practical classification, and the consideration of the diseases of the individual parts is as thorough as the scope of the work permits, embodying the principles of latter day thought and teaching. Chapters on the diseases of the urethro, bladder, ureters, and rectum and anus, diseases so frequently associated with morbid processes of the female genitalia, complete the work, for the student this is an excellent book; for the general practitioner with limited time, it places the generally accepted teachings at his disposal in a convenient form.

IRVIN ABELL.

STATE HOSPITAL FOR TUBERCULOSIS.

In the State legislature. Representative Hutt, of Philadelphia, introduced a bill on February 1st, for the selection of a site and the erection of a State hospital for the treatment of incipient tuberculosis. The institution is to be located within the limits of the State forestry reservation in Franklin county, of which from 500 to 1,000 acres are set aside, and an appropriation of \$200,000 is provided by the bill for the accomplishment of its provisions.—N. Y. Med. Jour. Feb. 18, 1905.

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ORGANIZATION WORK IN KENTUCKY.

The Council of the Kentucky State Medical Association met at the Galt House in Louisville on Saturday, April 1st. Drs. Richmond, McCormack, Aud, Cecil, McChord, Wells, Shirley and Lock, representing respectively the first, third, fourth, fifth, sixth, eighth, tenth and eleventh districts, were present. Each Councilor in turn was called on and gave an account of the state of organization in the counties in his district. With the exception of those embracing the Mountain Counties of the State, the councilor reports were most encouraging, and show the condition of organization all over the State to be most excellent. Very few counties remain with an unorganized profession, and these few are confidently expected to be rounded up and turned into the State fold before the end of the coming summer. The further and important work remaining for the councilors is to secure to membership in the county societies *every eligible physician*. Until this is done organization can not be claimed to be anything like complete and perfected. And after all these eligibles are all in, then still and always will remain the even more important work of stimulating and encouraging the scientific work of the county societies, work which in effect should take the place of post graduate work in the large centers of population.

In the mountain counties the situation is a different one. The physicians are few and isolated, the roads are rough and practically impassable for a portion of the year. It is impossible to reach many of the counties except by long rides on horseback; if the councilor undertakes to visit all the counties in his district he has before him days of strenuous physical labor, involving at the same time a very considerable sacrifice of valuable time. This would not be begrudged if results could be accomplished. But the doctors are so few

and far between that it has been shown to be practically impossible to get them together except on the occasion of a councilor's visitation. Like many plants, these county societies only flower once and then lie dead or dormant for the remainder of the year.

In consideration of all these facts, the Council authorized the councilor from the tenth district (Dr. Shirley), and councilor from the eleventh district (Dr. Lock), to organize two or more counties in their respective districts, as seems most feasible, into a district society in affiliation with the State Association, such society to serve as the ultimate unit of organization and as the portal of entry into the State Association and the American Medical Association. In the tenth district, along the line of the L. & E. Railroad, there already exists a prosperous district society known as the Kentucky Valley Medical Association. Its membership is drawn from a number of counties, some already supporting county societies, others not having yet succeeded in so doing. It is proposed to eliminate from active membership in this society all those residing in counties which have shown themselves able, by reason of numbers and contiguity of the physicians, to support a separate county society, but to admit all such to associate membership only; such associate membership, however, would necessarily be dependent on membership in such county society. The active membership, then, would be limited to residents of those counties in which a separate county organization could not be maintained.

This plan would seem to promise to solve a difficulty which has been harassing the councilors in the mountain districts ever since reorganization was effected.

In the ninth district the question is still more difficult for the reason that up to the present time there are no railroad lines penetrating into the heart of this district. As a consequence an assembling point is more difficult to attain.

It is to be hoped that the councilor of this district will be able to find a satisfactory solution of the problem, though at present it must be confessed that none is apparent.

The councilor of the ninth district has already begun his active season's campaign, having already visited several counties in his district, and perfected arrangements to visit the remainder.

The councilor of the third district, in conjunction with the Secretary of the State Association, has arranged to meet with the societies of the counties in the south central portion of the State as follows: Hart county, Munfordsville, April 29th; Metcalf county, Edmonton, April 30th; Cumberland county,

Burkesville, May 1st; Monroe county, Tompkinsville, May 2nd; Barren county, Glasgow, May 3rd; Allen county, Scottville, May 4th; Simpson county, Franklin, May 5th; Logan county, Russellville, May 6th. The whole journey will be accomplished by wagon.

HYOSCINE—MORPHINE NARCOSIS.

While general anaesthesia produced by the well known and generally employed agents, chloroform and ether, is all in all very satisfactory, still an occasional death from their administration, or a serious and distressing after effect, makes the surgeon seek and still hope for that ideal anaesthetic which will be devoid of danger at the time of administration or afterward, and which perchance may at one and the same time abolish sensation while leaving the sensorium clear and unclouded. Such agents are cocain and eucain when employed to produce local or medullary narcosis. Unfortunately these agents are not entirely devoid of danger, nor is the anaesthesia so produced always as perfect and complete as is desirable. It is certain, however, that the more these agents are used the more perfect are the results attained in the production of anaesthesia, so that to-day many capital operations can be successfully and practically painlessly performed by their use. The possibilities of these uses of cocain and eucain are certainly not fully appreciated by the profession at large.

The hoping for a safer and more satisfactory anaesthetic gives a great interest to a communication in the *Deutsche Medicinische Wochenschrift* for March 9, 1905. Dr. Diek, reporting from Dr. Rotter's clinic in the St. Hedwig Hospital in Berlin, reports the results of their use of a combination of hyoscine and morphine in producing general anaesthesia. This use of these drugs was first proposed by Schneiderlin in 1901, but the uncertain dosage coupled with some unfavorable experiences caused the matter to be dropped for a couple of years. For the past year and a half, however, Rotter has employed the method in all major operations, in the meantime having determined a safe dosage. He proceeds as follows: two hours before operation the patient is given hypodermically 1-2 mg. (1-200 gr.) hyoscine and 1.25 mg. (1-5 gr.) morphine; one hour before operation this dose is repeated so that the patient gets in all 1mg. (1-60 gr.) hyoscine and 2-5 cg. (2-5 gr.) morphine. If full narcosis is aimed at without the after assistance of ether or chloroform, the first injection is given three hours, the second two hours and a third one hour before operation, in such case a total amount of

1-12 mg. of hyoscine and 3 cg. of morphine being used.

Rotter reports from January, 1904, to March, 1904, 260 hyoscine-morphine narcotics. Of these patients 227 received two injections, 21 received three injections, and 12 received only one injection.

Three of the latter had so intense a reaction as to make further injection unnecessary; in the other nine further injections were not made because of the lack of time.

Ninety-three of these patients were over 50 years of age; 188 of the operations were abdominal: the remainder were amputations, carcinomas of breast, plastic operations, etc. Most of the operations were completed in 20 to 60 minutes: 47 lasted as much as two hours, and 10 more than two hours.

In 29 cases operation was completed without the use of any other adjuvant narcotic; of these cases 15 received two injections, 9 received three and 4 received only one.

In 144 cases ether alone was used in addition to the hyoscine and morphine. For operations lasting from 30 to 60 minutes the average amount of ether used was from 60 to 100 ccm. In those cases where chloroform was made use of as an adjuvant, 10-30 ccm were used for about the same duration of operation.

The course of the hyoscine-morphine narcosis is described as about as follows: two hours before operation the first dose is injected while the patient is lying abed. In a short while a marked drowsiness occurs, without any restlessness, such as is observed from larger doses. After an hour, when the second injection is given, the patient is still able to give precise answers, but evinces a strong desire to drop off to sleep. In the hour following the second injection the patient nearly always slumbers quietly, at most he arouses to complain of dryness of the mouth and ask for a drink, or he jerks slightly to and fro, especially in neck and face. On being transferred to the operating table, the patient wakes up to some extent, "stares with wide open eyes up into the blue;" the face is slightly reddened or cyanotic, and in about half the cases the pupils are dilated. The muscles are held rigid, but the patient assists in lifting himself onto the table. He still answers simple questions correctly, although slowly and hesitatingly. Left to himself he closes his eyes and drops back into sleep. The pulse is seldom quickened; in most cases it varies from 70 to 90. Respiration is deep and between 15 and 30 per minute.

If now ether or chloroform be administered to produce full narcosis, the patient breathes quietly along, especially if it is chloroform which is used. Only in alcoholics

is an excitation stage observed. The hyoscine inhibits flow from the glands, so that no trouble is caused in the way of salivary secretion even in the case of ether. Cough and vomiting do not occur; collapse and asphyxia were not observed a single time. Following the operation the patient falls into a deep sleep of three to eight hours duration. The patient wakes in comparatively good condition; he has slept through the first stage of wound pain. Most patients remember the first hypodermic injection, but cannot recall succeeding events. Sick stomach and vomiting practically never occur.

There occurred three deaths in the 260 cases, all three in aged and decrepit persons with intestinal carcinoma, one of 69, one of 73, and one of 79 years.

Rotter is not inclined to hold the special narcosis responsible for these deaths, but thinks it probable they would have all three have died from operation with any form of narcosis. He considers this form of narcosis extraordinarily humane, and quotes a colleague who had been subjected to it as saying: "This narcosis is ideal."

In the discussion J. Israel reports having used the method in 332 cases. He, however, has employed a much larger dose of hyoscine, 8mg. (1-7 gr.) with 2cg morphine given at one dose three quarters of an hour before the operation. In 9.6 per cent of his cases this sufficed without further anaesthetic; in the remaining cases he was compelled to give chloroform or ether as an adjuvant. The amount of these necessary was very small.

Israel also had three fatalities in his 322 cases, one in a very decrepit patient who had received in addition to the hyoscine and morphine 45ccm of ether. Death occurred with the first cut of the knife. The other two deaths occurred after the lapse of several days, and one showed a remarkable fatty degeneration of kidneys, liver and heart. Prof. Orth likened the condition to that following phosphorus poisoning, and in the absence of the possibility of the latter was compelled to believe the narcotic employed in anaesthesia was guilty. In this case 8mg hyoscine and 2cg. morphine were employed, followed by 25 ccm chloroform. Such a degeneration has never been observed from the administration of so small an amount of chloroform.

THE ABUSE OF X-RAY IN THERAPEUTICS.

It may not have occurred to many who have not followed the development of radio-therapeutic science that what is constantly being urged by experienced radio-therapeutists is anything more than a desi

to retain in their own hands these methods of treatment. But a short inquiry into this subject will show clearly the advisability of the retaining of the therapeutic uses of the X-rays in hands of fully qualified and experienced radiologists and dermatologists. It is constantly coming to our notice that a good many physicians, as Dr. T. L. Butler fitly expressed, "put 'machines' in their offices who don't know a negative pole from a telegraph pole." In no more important condition can the danger of this unskilled treatment be urged than in the management of a case of cancer. Unfortunately, so much has the subject been "written up" by the enterprising newspaper correspondent that the laity have an idea that the X-rays have taken the place of the alchemists' Elixir Vitae, and all they have to do is to sit and be cured.

That cases of undoubted malignant nature have done well temporarily, is acknowledged on all hands, and instances have come under my own experience, but also, unfortunately, has the reverse of this been obvious, where not only has no good been done, but there has been considerable doubt as to whether the disease has not progressed more rapidly in consequence of the treatment. This being the case, as in advising a kill or cure operation, the circumstances of the case should be laid carefully before the patient, and the latter left to choose accordingly.

Again there seems to be reason for supposing that the margin of treatment is a very narrow one. That is to say, with too little of the rays, the whole effect may be stimulation of the growth, as well as of the healthy cells. With too much of the rays, the healthy ones may be injured so that the disease may progress rapidly, and between these two there remains only a narrow margin wherein the safe administration can be expected to so depress the unhealthy cells that the healthy ones can overcome the diseased cells.

Considering how difficult this determination of the safe margin is, it is certainly of importance that no one but a skilled administrator should be entrusted with the case. The time is not yet ripe, if it ever will be, for the treatment of primary operable cases with the rays. Once the patient has fallen into hands of the unscrupulous medical man, the charlatan, or the quack, what chance will there be that he would recognize the indication for operation, or that he would recommend such a course if he did? The word "burn" is associated indissolubly with the X-ray treatment, and by it is meant a certain train of symptoms ensuing upon an over dose of the rays. Several cases have recently come to my knowledge in which such a condition occurred in the practice of a local medical radio-

therapist (?) who gave glowing reports of his wonderful cures, but a "burn" was not recognized by him as such and the fearful results of these "burns" were never mentioned. It is a pity and a crime to expose patients to X-rays for hypertrichosis or other facial blemishes, when one has no experience in such work, and when he is not sure what the results may be.

How much more is there a possibility of such occurrences in the hands of the many self-styled radio-therapists?

M. L. RAVITCH, M. D.

Louisville, Ky.

THE ANNUAL MEETING OF THE AMERICAN MEDICAL ASSO- CIATION.

The meeting at Portland, Oregon, July 11-14, despite its being so far away, will attract many members of the profession who are not in the habit of being regular attendants at the National Association's meeting. The Lewis and Clark Exposition will be in full blast in July, and will add much to the general interest of a trip to the far northwest this year. The West! California! These are words which carry a glamour with them. Many of us have lived for years in the hope that opportunity would come to see them. That opportunity is now; in addition to the small cost (half rates) this year, there is offered in the American Medical Association meeting and the Lewis and Clark Exposition a combination of attractions which should prove irresistible. Many will go to the great northwest this year because of the exposition alone; many will go because of the Association alone. Are not the two of them, then, sufficient, Doctor, to justify you in expending the money and the time necessary for the trip? And do not go alone; take your wife and children with you. The former needs a rest and a holiday as much as you do, and for the latter such a trip would be a liberal education, never to be forgotten and always to be talked about with pleasure and enthusiasm.

Appreciating all this trip has to offer, and desiring to serve the physicians of Kentucky in the matter of getting them to Portland most comfortably and with the opportunity of seeing the most possible for the money expended, the *Kentucky Medical Journal* has made arrangements with the railroads for a special train service. Announcement of this is made in another column of the *Journal*.

DR. EPHRIAM M'DOWELL.

The Henderson (Kentucky) County Medical Society recently by resolution requested

the Kentucky State Medical Association to exert its active efforts toward having a statue of Dr. Ephriam McDowell placed in Statuary Hall at Washington, thus indicating the "Father of Ovariectomy" as one of the two citizens of Kentucky entitled to that distinction. We have no doubt that this excellent suggestion of the Henderson County Society will be adopted by the State Medical Association when at its next annual session it is presented to that body. Attention is called to this subject at this time in order that members of the medical profession in Kentucky may at once give their thought and attention to a united effort on the part of the profession to accomplish this purpose. It will devolve upon the State Legislature, as we understand it, to indicate two eminent Kentuckians for the Hall of Fame at Washington. Unless the medical profession moves by concerted effort so as to influence our legislators, these honors will always be awarded to distinguished men who have played a conspicuous part in the political life of the State. This results in great part from the fact that few physicians seek public office and but few representatives of the medical profession are to be found in the legislature. Moreover, the work of distinguished physicians and surgeons is known only in a very general way to the public, and rewards of honor and distinguished merit are seldom bestowed upon medical men, however illustrious they may be. For this reason it devolves upon the attention of the legislature the claims of its great leaders for recognition.

No citizen who ever lived in Kentucky has left a name more imperishable than that of Ephriam McDowell. It is his distinction that he made a new era in surgery, by which thousands of lives have been saved annually and thousands more will continue to be saved every year to come. The operation which he devised and successfully executed laid the foundation of the most brilliant field in modern surgery, and has made his name familiar in every civilized country where medicine is cultivated as a science. It is not generally known that McDowell's great achievement was the result of careful study and deliberate calculation. It was not a discovery by accident; but any one who will study his reports of his work will realize that he had worked out his plans upon a scientific basis and with thorough appreciation of the requirements and conditions involved. Certainly no other Kentuckian, either dead or living, has done more for humanity and the public welfare than did McDowell. That his work was done in the quiet walks of an unostentatious professional life should add to,

rather than detract from, his claims upon the recognition of his countrymen. In 1889 the Kentucky State Medical Association erected an Danville an appropriate monument to his memory. It is eminently appropriate that the Association should proceed further and secure for him that recognition by the State which his great service to science and humanity so pre-eminently deserves.

L. S. McMURTRY.

THE PROPHYLAXIS OF TUBERCULOSIS.

Tuberculosis is at once the most deadly, the most widespread, and the most persistent of all diseases. It kills in one way or another, more people than wars or pestilence. Statistics show the death roll from all the wars of the nineteenth century to be "14,000,000." The death roll of tuberculosis for the same period was "30,000,000." This statement is appalling, and it seems hardly credible. Yet we are confronted by the carefully compiled statistics. Tuberculosis kills more people than all the other diseases put together. Many of the infectious diseases are looked upon with more fear and dread, yet they are not nearly so deadly and sure as tuberculosis. The active practitioner sees this hydra-headed monster in all its fiendish hideousness stalking abroad through our land, placing its blighting fingers on great numbers of our population, leaving them to slowly droop and die, and leaving in its wake a trail of death and destruction. No class of people, no set of men, except physicians, do or can have any adequate conception of the danger, breadth and magnitude of this dread evil. The doctor deals with it every day. He sees it on every hand, in every community, in all of its forms. The literature of his own and other countries informs him of the fact that the disease is universal or world-wide in its distribution. To the physician then, this whole subject is particularly interesting and appealing. For at least two hundred years, the problem of properly and efficaciously combating tuberculosis has occupied the time and attention of the various countries of continental Europe.

History tells us that both Italy and Spain as early as the Eighteenth century knew phthisis as an infectious disease, and adopted the usual precautions as regards insolation and disinfection. Royal decrees were issued concerning the management of phthisis. Medical congresses were held to consider ways and means. Commissions were appointed with unlimited time and means to thoroughly investigate the entire range of the subject and report. There is hardly a country in the civilized world to-day, that has

not taken up this work either publicly or through legislative acts. Germany, France, the United States of America, Austria, Russia, Italy, Norway, Sweden, Denmark, Belgium, Great Britain and her dependencies, and many other countries. The movement for the open air Sanatoria treatment of consumption received its first impetus from Germany. To France we are indebted for the investigation and the agitation of such questions as the methods of the transmission of tuberculosis, and the best methods to adopt to prevent its spread. Two royal commissions were appointed by the British government. The first was appointed in 1890, "To inquire into the effect of food derived from tuberculous animals on human health." In 1895 this commission handed in its report, and it stands to-day a masterpiece. It is not only interesting, entertaining, and instructive, but it is also thorough, comprehensive and scientific. With the above mentioned facts in view, then, is it not necessary and desirable to make renewed efforts, to take some definite and concerted action here in our own country, in our own states, and cities, with the object of ameliorating or lessening this great evil? Tuberculosis is always a preventable disease, and oftentimes even a curable one. The line along which we should work then naturally suggests itself, viz: Prophylaxis. This is the day of hygiene, prophylaxis and sanitary science. More can be done in stamping out tuberculosis by prophylaxis than in any other way. First arouse the profession to a realization of the danger; take the proper steps to secure a concerted and earnest effort from them. Second, through the profession interest the laity, and finally the legislative and executive bodies of the county, city, state and even the nation itself. See to it that congresses and commissions with ample powers and means are appointed to investigate, consider and report on the entire range of the subject. Appoint competent inspectors whose duty it shall be to inspect all dairy products, the cattle themselves and all public slaughterhouses and abattoirs. Make it a universal law that all cases of tuberculosis shall be reported just as the other infectious diseases are reported. Furnish affected individuals with printed slips giving full information not only how to take care of and protect themselves, but also how to keep from being a menace to their loved ones and friends. Encourage isolation in sanatoria whenever it is possible. Enforce by law thorough disinfection of rooms and quarters which have been used by phthisical patients. Have public ordinances for regular periodic cleaning and disinfecting of public conveyances, such as busses, street cars and railway

coaches. Have anti-spitting ordinances. Prevent people with tuberculosis in active stages from engaging in occupations that will endanger others, e. g., school teaching, etc.

The foregoing is simply a hint. It is, however, I believe a timely one. The medical profession as a whole can hardly dodge this issue any longer. They must grapple with the problem. They must take up this matter with the earnest, honest intention of doing something. And best of all they *must* do something.

W. A. JENKINS, M. D.

Louisville, Ky.

WHY SHOULD WE?

From the earliest ages when the practice of medicine was enshrouded in the traditions of the medicine man or was handed down from Friar to Priest, and from Priest to Friar, when a composition of a multitude of roots and herbs were compounded and concocted, when the hour of the night, the state of the moon, exerted their useful or baneful influences, the medicine man of yore was accustomed to administer these mixtures with vocal mutterings, and corporeal gyations. Blind faith in their composition, lack of diagnosis, lack of discriminating knowledge, lack of judicial inquiry into cause and effect all combined to make the user more dependent upon and more exact in the proper and detailed performance of the aforesaid mysteries accompanying his prescribing. We are prone in casting our eye over the state of medical practice in by-gone years to let that glance be one of pity and condescension, but the question that occurs to me is, "Are we victims of the mental, moral, and physical degeneracy that is supposed to mark the present era of increased luxury and profligacy, which is slowly but surely passing over our lands?" I am afraid in answering these questions we will arrive at the conclusion that some of us must be the victims of degeneration, or possess marked atavistic tendencies. To-day the polished medico-commercial gentleman, dressed in the latest and most fashionable attire, with overcoat of the latest style, with immaculate linen, and shining beaver, with his ever present small satchel, with his plenteous literature and pretty samples, beguiles us with latest small talk, and best "Bon-mots" of the hour, and so gulls us with seductive tales of the power and potency, cure and counter-cure of his preparation, that reason, cynical, cold, analytical, severe, is dethroned, and his wonderful fetish set up in our midst in such a prominent place that "He who runs can read." Are we retrograding to the period when the savage muttering

and bodily gyration marked the administration of remedial measures? For instead of the physical fantastic motions, we have the polished bow; instead of the wild incantation, we have the poison gently instilled into us, with a suavity and insidiousness directly in proportion to the quantity of civilized shellac. Quackery is rampant, and it is time the medical profession placed its foot upon the neck of this constantly growing evil. What is the use of higher education, what is the use of analytical laboratories, chemical research, bacteriological investigation if we are to allow the quack and nostrum vender to override and trample down this growing science of ours. Do not let me be misunderstood. I do not include the reputable manufacturer or the reputable products which have done so much to further the usefulness, palatability, and purity of the *standard well-recognized remedies new and old*. To these I present my compliments. To the other I say that it is a misfortune that our profession is not a unit, a shame that we are not endeavoring to stamp out this poisonous vine clinging to the edifice of medical science, an edifice hoary with age, and the representative of more good deeds done, deeds of which the left hand knoweth not what the right doeth, a science crowded with unknown heroes. Friends, do not give up the fight; battle for right and let us keep in the mighty vanguard of medical progress, hoping for the day when merit, truth, honest, probity, and character will give us grand rewards, so rarely gotten but so richly deserved. Sic Transit Gloria Mundi.

CURRAN POPE.

SOME MUCH NEEDED LEGISLATION.

If the Kentucky Legislature wants to do the whole people an actual service, we don't know any better way to go about it than to establish sanitariums for the inebriate, the cocaine and morphine fiends, and then pass a law compelling all who are convicted after fair and impartial trials to go into them, and remain till cured. We take it that the public trend toward hospitals for tuberculosis is so strong that our law makers can not much longer withstand the pressure within and without the profession. So when asylums for all the above is an assured fact what a haven of rest and security the people of this grand old commonwealth will enjoy. So we say with much emphasis "honorable gentlemen" quit talking politics, quit telling what Bryan said and did, what Roosevelt has done and can do, and do something for your day and generation that will be of inestimable

good to those living now, and will cause coming generations to call you blessed. We think that for the fiends that so numerous inhabit our fair state to roam at large seeking who they may devour by precept and example and especially the young and unsuspecting, is almost as deplorable as for the insane to have unrestrained liberty. And while the latter may do more bodily harm to those with whom he comes in contact, it will be only for a while, for sure and speedy vengeance will be engendered by his own acts, and thus his unfortunate and miserable existence will be speedily brought to a close. But the object lesson of the fiend, whiskey, morphia and cocaine, multiplies rapidly and we take it that no informal person to-day will deny that their number is constantly on the increase, and that in many instances they are utterly helpless to break off the hold of the monster when once firmly fastened to them is equally true. Therefore we unhesitatingly say it is best for both the patient and the public that kind and curative restraint be placed upon all who can not help themselves. We believe too, that the knowledge of the fact that deprivation of liberty was the legal result of such practices would restrain many who indulge (especially in alcohol) for the purpose of committing crimes and misdemeanors, under the guise of irresponsibility on account of "being" full, from imbibing. "So mote the asylums for all the above soon be."

I. A. SHIRLEY.

THE REHABILITATION OF ORGANIZATION.

With the coming of spring, organization should begin anew to bud and blossom, as do the mute things nestled in the bosom of Mother Earth. During the cold of winter, with bad roads and biting winds, it was too much to expect country doctors to ride ten miles away to attend the meeting of the county society. But now no such excuse exists, the air is balmy, the fields are green, earth and air invite an outing, and he who remains at home in his stuffy back office must be adjudged a poor thing, lacking both appreciation of the joy of existence in the spring time and the sense of duty which should impel every reputable physician to give his support to the betterment of the condition of the medical profession as a whole. Let every present member of the county societies make it his personal duty to bring into the society some one of the eligible members of the profession who still remain without the fold. All of these men can be brought in in this way, and this is the only way in which it can be done. Let no one

stand back, hesitating, in the belief that there are men appointed to do this work. There are men so appointed *especially*, but we are all appointed *generally*, and the pull, long, strong and all together, will fetch them when the best special organizer in the world would fail.

The work of organization is proceeding apace all over the country. Kentucky, up to the present time has held a proud place in the very van; it remains with the members of the State Association, of the county societies, to bring to full fruition this most promising movement, or to neglect it and let it wither and die. Is there any choice?

COUNTY SOCIETIES.

[Secretaries of county societies are requested to furnish for this column, and without further notice, all county society news of interest, such as the date and place of the monthly meeting, notice of death and marriage, epidemic disease, and, in fact, everything which might be of interest to brother practitioners in the State.]

The *Calloway County Medical Society* held its regular quarterly meeting on Wednesday, April 5th, 1905. Dr. W. W. Richmond, of Clinton was to meet with us, and some doctors from adjoining counties were invited to be our guests for the day. A good program had been arranged and some excellent papers were read.

Dr. E. E. Curd's paper on "Homoculture" was good and called out a lengthy discussion. It was voted to have this paper reread at the Southwestern Kentucky Medical Association and then sent to the Kentucky Medical Journal for publication.

The pastors of the three churches were invited to partake of the dinner that was tendered the visiting brethren of the society. Everyone seemed to have a good time and our pleasures were only marred by the absence of our councillor, Dr. W. W. Richmond, who was not able to attend.

W. H. GRAVES, Sec'y.

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The *Caldwell County Medical Society* met in Princeton on Tuesday, April 4th. With the consent and approval of Dr. James H. Lercher, councillor of this district, the Caldwell and Lyon County Societies were consolidated under the name Caldwell-Lyon County Medical Society. The attendance was larger than usual and I hope interest in society affairs will be revived.

Our next meeting will be held in Princeton, on Tuesday, May, 2.

R. W. OGILVIE, Sec'y.

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The *Christian County Medical Society* met

in the City Court Room in Hopkinsville, Ky. April 17, 1905. The following members were present, Drs. Woodard, Jackson, Petrie, Sargent, Caudle, Gates, Anderson, Blakey, Bell, Harned, E. Kileton. Dr. Caudle presented a very interesting paper on "The Physician as a Business Man," which was well received and enjoyed by all present. Society then adjourned to meet third Monday in May, 1905.

J. W. HARNED, Sec'y.

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The *Fayette County Medical Society* held its regular monthly meeting at the Court House in Lexington, on March 15th. Dr. Andrews read a paper on "Injuries of the Soft Parts During Parturition". It was very fully discussed, bringing out the views of almost every member present upon the subject. Dr. VanMeter was in favor of repairing all tears in the soft parts, even those of the cervix, but the majority of the members took issue with him upon that point, thinking it best to repair immediately all tears of vagina and perineum, but to wait until after involution had taken place to repair the cervix, except those cases where it was necessary to stitch up the cervix in order to control hemorrhage from it.

Dr. Wiley reported a case of puerperal sepsis which he had seen in consultation and which he believed owed recovery to the use of antistreptococic serum. The society voted to allow Dr. Stucky to read a paper by title on "The General Practitioner and Suppuration of the Middle Ear."

Dr. VanMeter brought before the society the advisability of the Board of Health requesting the public to disinfect all books returned to them, before allowing them to go out again. He said he believed this was the way his own child contracted scarlet fever. He was appointed by the society to look into the matter and report at the next meeting.

W. H. SMITH, Sec'y.

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The regular meeting of the *Hickman County Medical Society* was held on April 6th, with an unusually large attendance. The following members were present: Drs. W. W. Richmond, J. R. Scarborough, R. S. Kilough, W. R. Moss, G. R. Mahan, Chas. Hunt, R. L. Ringo, George C. Thomas, J. M. Beeler, E. B. McMorries.

Dr. George C. Thomas read an excellent paper on "Small pox," and Dr. G. R. Beeler read a paper on "Defects in Hearing" which was equally good. These papers were discussed by all present.

We feel that this was one of the most interesting meetings we have had for some time. Our society is in good working order

and we feel proud that it is so. We meet in regular session the first Thursday in July.

E. B. McMORRIES, Sec'y.

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The *Harrison County Medical Society* met with Dr. W. T. Stewart on April 3rd, at Cynthia. Some interesting cases were reported. Dr. N. W. Moore reported a case of myxoedema and exhibited photographs showing the improvement under the use of thyroid.

Dr. John Boyd, of Cynthia, read a paper entitled "Autointoxication" which was freely discussed by most of the members.

Dr. Joseph Martin offered a resolution which was adopted, petitioning the mayor and council of Cynthia to pass an anti-spitting ordinance, so as to prohibit any person from expectorating on the sidewalks or on the floors and stairways of any public building.

After the transaction of other business the society adjourned for lunch to meet the first Monday evening in July at Cynthia with Drs. B. B. Petty and J. P. Chamberlin.

J. M. REES, Sec'y.

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The *McLean County Medical Society* met at Livermore, Thursday, April 6, 1905. The society was called to order by Dr. H. J. Beard, President; after which the program was carried out as follows: Dr. R. L. Ford, of Livermore, read a very interesting and instructive paper on "Neurasthenia" in which he related a number of cases, giving his experience and treatment which was also very interesting. After reading, the paper was discussed by the society with much interest.

Dr. J. H. Thorp, of Utica, Ky., was present and took an active part in the discussion, after which he related his experience in treatment of such cases. He was listened to with much interest by the society, and we congratulate ourselves on having Dr. Thorp with us, and cordially invite him to meet with us again in the near future.

On motion, the society adjourned to meet at Calhoun in July.

J. H. HARRISON, Sec'y.

KENTUCKY NOTES.

Dr. H. H. Stamper died at his home in Campton, Ky., November 11, 1904, aged thirty-one years. He graduated at the Kentucky school of Medicine in 1892. After practicing his profession in Indian Territory and Kansas two years he returned to his native health, Campton, where he continued to practice medicine to the time of his death. He was a member of the Wolfe County Medical Society, the Kentucky Valley Medical Association and the Kentucky Medical Association.

He was a member of his county board of health and also one of the Campton board of examining surgeons. He was a member of the Masonic order as well as the order of Odd Fellows. He was well and favorably known to the writer who saw much in his work and manliness to admire. He was one of the best posted all around practitioners to be found anywhere outside of the great medical centers. His was a conspicuous personality at the meetings of the Kentucky Valley Medical Association, where his papers and discussions were invariably of a high order. He will be missed much in these meetings and in fact where ever he had an opportunity to say a word or do a deed that would further the cause of legitimate and honorable medicine. But he is gone: let's forget his faults, cherish his virtues, and extend to his widow and five little girls, and to his father and mother, Dr. J. H. Stamper and wife, our sincere condolence and sympathy in this their hour of sorrow and grief.

I. A. SHIRLEY,

THE IMPORTANCE AND METHODS OF EARLY DIAGNOSIS OF PUL- MONARY TUBERCULOSIS.

That diagnosis constitutes a large and important part of the art of medicine, in its widest sense, will scarcely be contradicted by any practitioner of the art. The statistics of competent observers the world over show in unmistakable manner that the mortality of many surgical as well as medical conditions is in direct proportion to the promptness and thoroughness with which disease in its earliest beginning is recognized. In no disease which attacks the human being is this fact capable of clearer demonstration than in pulmonary tuberculosis. The attitude of hopefulness and confidence which all modern phthisiologists feel toward the final extinction of human tuberculosis rests upon their experience with the curability of the disease when it is recognized in its incipency and when proper steps are promptly taken to give its subject the best chance to win in the struggle which is bound to come between parasite and host. But opinion and common practice differ widely in the mental conception of what constitutes the early diagnosis of this condition. The very limitation imposed by the word early, shows that no gross pathological changes offer themselves here for recognition. The diagnosis is to be made—if made at all early—before consolidation of any extent, softening, cavity formation, profuse bacilli-laden expectoration, mixed infection, sepsis, etc., are in such prominence that "he who runs may read," before the layman even sus-

pects tuberculosis and much less asks his physician whether he does not think he has some "lung trouble". In reality the so-called "pre-tubercular condition" is the condition which ought to be recognized, and it is not asking too much of every general practitioner to expect him to be able to make this diagnosis. When we analyze the diagnostic errors which are committed, it will as a rule be found that the failure to closely study the individual case, in the light which diagnostic art can supply, is responsible for a large part of the commoner errors. The symptom-complex of early pulmonary tuberculosis is by no means a constant one and hence does not hinge upon any single fact. It is rather an entire syndrome which must be constructed partly from the history and partly from physical examination. In the first place, it is of prime importance to get away from the idea of heredity as an efficient factor in any individual case. Of far greater importance is association and undoubtedly, in the fact that parents have infected directly their children from prolonged association lies the "milk in the cocoanut" of the heredity idea in the disease. In taking the history of any case which presents itself for diagnosis it is important to learn the occupation and the health of associates both in the home and the shop, whatever business place the patient has. This history should include all the ailments from which the patient has suffered since childhood, as it is well known that many of the acute infections pave the way for the tubercle bacillus. Among the conditions one often encounters in these cases is the history of pleurisy. That many pleurisies are of tubercular origin is now no longer doubted by pathologists and such a history should at once put us on our guard. The frequency with which diabetes and tuberculosis are associated is also of great significance as tuberculosis is not uncommonly a terminal infection in diabetes. Aside from the history and physical examination, the early symptoms most usually prominent are cough, slight expectoration, loss of weight and strength, disturbances of digestion and variation from a normal temperature and in rare instances hemoptysis. Where the disease begins with hemorrhage few will be in doubt about the case for any great time. The detection of an abnormal temperature range is not always so easy, but is one of the most essential steps to take if an early diagnosis is to be arrived at at all. In the opinion of the writer no other single symptom outweighs this in importance. A temperature chart taken at two hour intervals for a few days, both after exercise and a period of quiescence will show a very characteristic afternoon rise and is one of the most valuable

links in the diagnostic chain. The temperature hovering about 100 degrees or over daily may well awaken suspicion, and this even in the absence of a positive cough. The latter symptom deserves the closest study. When present, and it generally is an early symptom, every other source that may cause it should be carefully investigated and if possible cleared up. These may include an acute bronchitis or some ailment of the nasopharynx, pharynx, etc. But with these sources of irritation removed or acute conditions having subsided, to call a persistent, irritating cough—a "stomach cough" and to stop all study there, involves an awful dereliction of duty. The relation between stature and weight is unfortunately such a wide one that variations from any standard are so common that we can get no help from any such general source. But each individual, is in the matter of weight his own standard and it is of vast importance to know and to be able to follow closely the body weight in suspected cases. To explain a steady loss of weight by "dyspepsia" without all the proper checks thrown about this explanation is to lose often the chance to cure the "dyspepsia" as well as the patient, for many such "dyspeptics" are unfortunately in the earliest and curable stage of phthisis. With these preliminary but vital points cleared away, the next step is the physical examination and it is here in the opinion of the writer, that most serious errors are possible. We wish to say in the very outset, that negative findings on physical examination as ordinarily carried out ought not outweigh the evidence of the history—the temperature and the other symptoms which have been described. Percussion is practically valueless, and the same may be said of palpation and vocal fremitus. The information elicited by careful and *comparative* stethoscopic auscultation is of far greater certainty and value. Where only one apex is involved, and in early cases this is largely the case—the breath sounds are feebler, there may be a pleuritic friction sound over the involved area, the sound of expiration is prolonged until in point of time it nearly equals and may exceed the time of inspiration. There is a stickiness or moist character to the inspiratory sounds not heard upon the sound side and rales are few or none—such as are heard are very finely crepitant or subcrepitant. The presence of these finer rales may be brought out by coughing. The microscope may show bacilli or elastic fibres and when these are present all doubt as to diagnosis is at an end, but waiving such positive findings, a negative opinion in any case of suspicious character ought never be given until repeated examination and study have fully cleared up the en-

tire clinical picture. The tuberculin test has possibilities of error and in its very nature can not be of much use to the general practitioner. The X-Ray is so largely impractical for the many that it cannot be considered as of much help to the great bulk of physicians as a diagnostic aid, and similar objections exist to the test of Arloing and Courmont—the agglutination test. After all is said it is upon the previous history, the clinical history and the physical examination upon which the diagnosis must rest, and only when persistent careful study of a case along these lines fails to give the information sought, ought a negative finding be reported. Under all circumstances the patient ought to be given the benefit of the doubt and perfect frankness be used in stating his condition.

J. A. FLEXNER.

THE WEARING OF INSIGNIA BY MEMBERS OF PATRIOTIC SOCIETIES.

*To the Officers and Members of the Various
Patriotic Societies of the United States.*

Gentlemen:

As you are doubtless aware, for the purpose of manifesting the appreciation of the Nation, and of giving some fitting recognition of its gratitude for the self-sacrifices of the men who have done so much to establish and maintain the Republic in the several wars in which it has been engaged, the Congress of the United States, has at various times adopted legislation, extending recognition to the several Patriotic Societies, and authorizing such of their members as might be in the Army and Navy to wear their badges when in uniform, on occasions of ceremony. This action was made effective in most cases by suitable Regulations and General Orders, which have continued in force to the present time.

These provisions, while they have added nothing to the cost of maintaining the military establishment, have been productive of nothing but good to the service and to the country, in that they have increased the esprit de corps of officers and men, and have placed the insignia of these Societies among the distinguished decorations of the world, recognized in every land as badges of honorable service to the Nation, and giving the wearers a standing that can but be gratifying to every fair minded man who loves his country. And this recognition is an inspiration to all our citizens to a higher patriotism and a better citizenship.

This Association is composed of approximately 2,000 members all of whom (with the exception of a few Corresponding members,

who are distinguished medical men in the service of other nations, and a small number of Associate and Honorary members, elected for merit) have served the Republic in the Medical Department of either the Army, Navy, National Guard or Marine Hospital Service, very many of them in the field in war, and all with credit and honor to themselves and to the country.

The Association was duly incorporated by the Congress of the United States by an Act approved January 30th, 1903, and by this Act its members are authorized to wear its insignia.

This Act has been in force since its passage, but for some reason the Judge Advocate of the Army, has ruled, that it is of no effect without a specific army regulation specifying the occasions on which it may be worn. The General Staff to which the question has been referred for recommendation, it now transpires, proposes not only to take no action in this particular case to carry out the will of the Congress made manifest in the Act of January 30th, 1903, but contemplates the withdrawal of the right to wear the badge of all patriotic societies from army officers. This purpose is clearly stated in the following extract from a letter on the subject from the War Department:

" * * * * * The Secretary of War desires me to say that the recommendation of the General Staff on this subject is not directed to the particular case of the wearing of badges by officers of the Army who are members of the Association of Military Surgeons of the United States, but to the wearing of any badges or decorations whatever with the uniform that are not conferred on the individual officer for personal service. The general subject of wearing badges and decorations with the uniform has been the subject of study for some time by the Department, and the fact that the wearing of certain badges with the uniform is protected by law has alone prevented action looking to the prescribing in orders of exactly what decorations could be worn with the uniform, and for exactly what service, to the end that such decorations so prescribed, and none other should be worn. In consideration of the fact that the wearing of certain badges with the uniform is authorized by law, the proposed action of the department will require congressional authority, and the pressure of business has up to this time prevented a request for such authority being submitted to Congress.

"The Secretary of War desires me to add that with such views of the proprieties of the case, you will see how impossible it is to extend to any society, however deserving, this

privilege which it is hoped soon to be able to withdraw from all."

It will be seen from this letter that instead of carrying out the plain directions of the Congress, the proposed action of the General Staff would seriously cripple the usefulness, and even jeopardize the life of ALL the patriotic societies, from the Cincinnati to the Spanish War men, by taking from them this official recognition, and preventing their members who are in the service from wearing their badges when in uniform and on occasions of ceremony.

This having come to the knowledge of this Association, led to the designation of the undersigned as a committee to call the attention of the several patriotic societies to the proposed action of the General Staff, and ask that they join with us in addressing the President, the Secretary of War, and the Congress of the United States and the members thereof personally, protesting against any action, by the Congress, or the General Staff looking to the withdrawal of the right of any officer or man of the Army or Navy, who may be entitled to do so, from wearing when in uniform, the badge or insignia of any patriotic society founded to perpetuate the memory and improve the character of services rendered the Republic.

We ask that you take such action as a body as may seem best to attain the desired end, and that you urge your members that they individually address their senators and congressmen, most emphatically protesting against any action tending to restrict or prevent the wearing of the insignia of any patriotic society authorized by congressional action, when in uniform, by the officers of the Army and Navy of the United States.

This Committee will be glad to have a copy of any action that you may take in this matter.

Very respectfully yours,

OTIS, H. MARION,

Brigadier General and Surgeon General,
Mass. V. M., Chairman.

JAMES TAGGART PRIESTLY,
Brigadier General and Surgeon General, (retired), N. G. Iowa.

R. HARVEY REED,
Colonel and Surgeon General, Wyoming
N. G.

EDMUND CONE BRUSH,
Lieut. Col. and Chief Surg. Ohio N. G. (acting Surgeon General).

THOMAS PAGE GRANT,
Captain and Assistant Surgeon, Ky. S. G. (retired), Secretary.

THE POSTPONEMENT OF MEDICAL UNION IN NEW YORK STATE.

We noted last July the attempt of certain members of the Onondago County Medical Association to defeat the plan of union of the two State medical organizations by raising the plea of illegality in Justice Fitzgerald's court in this borough. This plea was unfortunately sustained, and the hopes of a lasting peace in the medical ranks in New York State must therefore be abandoned for the present. The point raised was that, inasmuch as the by-laws of the State Association contained no provision for the manner of giving notice of meetings, it was necessary to fall back upon the common-law rule. According to this, when a meeting of any organization is to be held for the passage of resolutions affecting privileges or property rights acquired by membership in such organization, the notice of the meeting must be served upon each member personally (not through the mail). Of course, no such notice of the special meeting of March 21, at which the plan of union of the two State societies was endorsed, was given, hence the court has ruled that that meeting was held illegally, and that the resolutions then adopted were of no force, and the action taken was binding upon none of the members. We understand that notice of a proposed revision of the by-laws, providing for a simple manner of calling meetings, will be introduced at the coming session of the State Association in this city; but such notice must stand over one year before being acted upon, and if we read the signs aright, there will be considerable opposition to any revision of the by-laws of the Association in October, 1905. Those who opposed union believe they have not postponed it only, but have made it impossible for all time. We trust they will be disappointed.—(Medical Record.

VARICOSE VEINS.

Kennedy discusses the remote results of operations for varicose veins of the lower extremities. He concludes that the operation which gives the best and most permanent results is that in which not only the varices are removed, but also the trunk of the internal saphena in the thigh, and thinks that the result will more certainly be permanent if this portion of the vein is very extensively resected. No doubt recurrence might develop even after this operation, on account of anastomoses gradually developing from the upper end of the internal saphena which is allowed to remain, but his results have not hitherto shown a case of recurrence. No operation will radically cure varicose veins, but will only

ameliorate the condition. Yet, when patients who previous to operation were unfit for any serious exertion or long standing, and who presented on their legs extensive and prominent varices, and who years after the operation, neither show any appearance of varices nor complain of any disagreeable symptoms, surely the operation is worth performing.—N. Y. Med. Jour. November 19, 1904.

THE PHYSICIANS SUPPLY CO.

Under the Corporation Title of "The Physicians Supply Company," a number of the profession throughout the State have associated themselves as manufacturing pharmacists, chemists and handlers of physicians' supplies, with temporary quarters at 125 Third street, Louisville, Ky., where large tablet, pill, mixing machines, granulators, coating pans and all other machinery have been located and placed in operation.

There is a field in Louisville for an enterprise of this character and it is believed that the profession will not be slow to appreciate it. Physicians' Supply Companies in other States have done much for the promotion of the physicians' interests. The Louisville Company has already established a complete directory and record of graduated trained nurses, subject to an immediate call to supply physicians' wants.

The management of the Physicians' Supply Company is vested in John K. Higgins, Ph. G., Ph. C., late of Wampole & Co., and for sixteen years actively identified with the pharmaceutical business. The Board of Directors are composed of: Dr. W. H. Wathen, Dr. Jos. M. Matthews, Dr. T. H. Stucky, Dr. A. M. Cartledge, Dr. H. Horace Grant and Dr. R. B. Gilbert.

The Physicians' Supply Company has set aside a portion of its capital for the erection of a pharmal building for its exclusive use and requirements, plans for which will be prepared as soon as a suitable site can be located.

COMPULSORY VACCINATION IS LEGAL.

Justice Harlan, of the Supreme Court of the United States, February 20, delivered the opinion in the case of Jacobson vs. the United States, involving the validity of the Massachusetts State law, giving authority to the health authorities of cities and towns in the State to impose compulsory vaccination on the ground that the protection of the health of a community may be exercised by the State as a police regulation.—Med News, Feb. 25, 1905.

THE SOCIAL EVIL.

The American Society for Sanitary and Moral Prophylaxis was organized last week at a meeting of thirty well-known physicians, clergymen and men of public spirit at the New York Academy of Medicine, No. 17 West Forty-third Street. In genuine sincerity it is announced that the society proposes to treat the social evil just as the community at present treats cholera, diphtheria or any other contagious diseases, which by its very presence menaces the health of large numbers. Dr. James Smith presided. Dr. Prince A. Morrow declared that the treatment of the social evil, as it is handled in this city, is nothing short of a crime. He denounced the interference of well-meaning reformers and faddists, who have dispersed this evil and by means of Raines law hotels and other institutions of the sort caused it to spread its blight all over the community. He declared it ought to be handled by the Health Department, just as they handle infectious and contagious diseases, and to treat it in any other way is a dangerous crime. Dr. Morrow wants to have literature distributed in colleges and schools where young men may get some idea of the extent of the peril to which many submit themselves. He suggested circulars and pamphlets and articles by competent authority in medical and lay journals. He expressed the belief that there is hardly a public woman in this city in normal health. Dr. Morrow's sentiments were accepted and indorsed without reserve by Prof. Felix Adler and Prof. Seligman, of Columbia, both of whom were present and made addresses. Dr. Ludwig Weiss and Edward T. Devine, of the Charities Organization Society, also discussed the subject. Bishop Potter and Dr. Lyman Abbott sent letters pledging their support to the society. Dr. Morrow said that \$10,000 is practically pledged to start the work. Dr. Smith was authorized to draw up a constitution and by-laws, and at the next meeting officers will be chosen.—(Med. News, Feb. 18, 1905.

THE CURABILITY OF LEPROSY.

In his last report, the Surgeon General of the Army gives an account of favorable results obtained in the case of a soldier who had contracted leprosy, and expresses a hope, if not a belief, that this disorder may become amenable to medical treatment. With the means afforded by modern science, especially the mysterious X-ray and other similar agencies, there does seem room for hope that some forms at least of the disorder may yet succumb to medical science. There is no rea-

son to suppose that the leprosy bacillus, which has apparently so little vitality outside the human organism, is absolutely resistant to all medical treatment within the bodies of its victims. At least, we may hope to abate some of its symptoms and rob the disorder of some of its most repulsive features. Dr. O'Reilly's report gives us additional evidence of that received from other sources of the possibility of something being done to destroy this opprobrium of medicine. We can not hope to overcome disease in general, but there is no reason why any single disease should be always and invariably resistant to therapeutic measures, and leprosy need not be the exception.—(Jour. A. M. A., Oct. 29, 1904.

LOW RATES FOR THE PORTLAND SESSION.

We are glad to announce that very low rates have already been agreed on by the western railroads for the Portland session. The round trip rate will be \$45 from all Missouri points. The passenger associations, that have thus far acted have agreed on a half rate from their eastern territory to Missouri River points. This will make the rate from Chicago for instance, \$56.50. From present indications, half rates will be given from all points South and East, with the possible exception of the New England Passenger Association territory. The time will be practically unlimited, terminating late in the fall. Thus those who desire can make the trip to Portland their summer vacation. Arrangements are being considered whereby a special train or trains will run a week before the session by way of Yellowstone Park, giving a chance to spend a week there on the way West. Similar arrangements can be made by individuals or parties for the return trip. Members will be able to go by one route and return by another. In future issues of *The Journal* we hope to be able to give a description of the various routes and their attractions.—(Jour. A. M. A., November 12, 1904.

DR. WILLIAM T. COUNCILMAN.

Dr. William T. Councilman, professor of pathology in the Harvard Medical School, according to the public press, disputes the findings of the Roswell Park Commission in its study of cancer, which were to the effect that cancer can be cured by a serum. According to the despatch, Dr. Councilman stands by the findings of the Harvard experts, who recently came to the conclusion that cancer is amenable only to surgical procedure.—(N. Y. Med. Jour. January 28, 1905.

End

